INDEX I.

In which the Plants contained in the fifth Faſciculus are arranged according to the Syſtem of LINNÆUS.

	Latin Name.	*Claſs and Order.*
1	Liguſtrum vulgare	DIANDRIA *Monogynia.*
2	Veronica Anagallis	
3	Veronica ſcutellata	
4	Valeriana Locuſta	TRIANDRIA *Monogynia.*
5	Alopecurus pratenſis	TRIANDRIA *Digynia.*
6	Alopecurus geniculatus	
7	Bromus giganteus	
8	Holcus mollis	
9	Hordeum murinum	
10	Melica uniflora	
11	Melica cærulea	
12	Poa aquatica	
13	Sherardia arvenſis	TETRANDRIA *Monogynia.*
14	Sagina apetala	TETRANDRIA *Tetragynia.*
15	Potamogeton criſpum	
16	Atropa Belladonna	PENTANDRIA *Monogynia.*
17	Lycopſis arvenſis	
18	Lyſimachia nemorum	
19	Lyſimachia vulgaris	
20	Chenopodium olidum	PENTANDRIA *Digynia.*
21	Scandix Pecten	
22	Linum uſitatiſſimum	PENTANDRIA *Pentagynia.*
23	Leucojum æſtivum	HEXANDRIA *Monogynia.*
24	Convallaria majalis	
25	Juncus piloſus	
26	Juncus ſylvaticus	
27	Aliſma Plantago	HEXANDRIA *Polygynia.*
28	Aliſma Damaſonium	
29	Rumex Acetoſella	HEXANDRIA *Trigynia.*
30	Erica vulgaris	OCTANDRIA *Monogynia.*
31	Spergula arvenſis	DECANDRIA *Pentagynia.*
32	Agrimonia Eupatoria	DODECANDRIA *Digynia.*
33	Spiræa Ulmaria	ICOSANDRIA *Pentagynia.*
34	Roſa canina	ICOSANDRIA *Polygynia.*
35	Tormentilla officinalis	
36	Ciſtus Helianthemum	POLYANDRIA *Monogynia.*
37	Papaver dubium	
38	Papaver Argemone	
39	Origanum vulgare	DIDYNAMIA *Gymnoſpermia.*
40	Teucrium Scorodonia	
41	Antirrhinum minus	DIDYNAMIA *Angioſpermia.*
42	Euphraſia officinalis	
43	Rhinanthus Criſta Galli	
44	Schrophularia aquatica	
45	Thlaſpi campeſtre	TETRADYNAMIA *Siliculoſa.*
46	Sinapis alba	TETRADYNAMIA *Siliquoſa.*
47	Sinapis arvenſis	
48	Siſymbrium Irio	
49	Siſymbrium terreſtre	
50	Eryſimum officinale	
51	Lathyrus Aphaca	DIADELPHIA *Decandria.*
52	Spartium Scoparium	
53	Trifolium procumbens	
54	Vicia Cracca	
55	Crepis tectorum	SYNGENESIA *Polygamia æqualis.*
56	Leontodon hiſpidum	
57	Onopordum Acanthium	
58	Prenanthes muralis	
59	Sonchus paluſtris	
60	Achillea Ptarmica	SYNGENESIA *Polygamia ſuperflua.*
61	Anthemis Cotula	
62	Chryſanthemum Leucanthemum	
63	Matricaria Chamomilla	
64	Senecio erucæfolius	
65	Orchis latifolia	GYNANDRIA *Diandria.*
66	Sparganium ramoſum	MONŒCIA *Triandria.*
67	Sparganium ſimplex	
68	Mercurialis annua	DIŒCIA *Enneandria.*
69	Agaricus aurantius	CRYPTOGAMIA *Fungi.*
70	Agaricus æruginoſus	
71	Agaricus carnoſus	
72	Agaricus verrucoſus	

INDEX II.

Latin Names of the Plants in the fifth Faſciculus, arranged Alphabetically.

INDEX III.

Engliſh Names of the Plants in the fifth Faſciculus, arranged Alphabetically.

LIGUSTRUM VULGARE. PRIVET or PRIM.

LIGUSTRUM *Lin. Gen. Pl.* DIANDRIA MONOGYNIA.

Cor. 4 fida. *Bacca* tetraſperma.

Raii Syn. ARBORES BACCIFERÆ.

LIGUSTRUM *vulgare. Lin. Syſt. Vegetab.* p. 54. *Sp. Pl.* p. 10. *Fl. Suec.* n. 5. *Haller. Hiſt.* n. 530. *Scopoli Flor. Carniol.* n. 4. *Hudſon. Fl. Angl.* ed. 2. p. 3. *Lightfoot Fl. Scot.* p. 72.

LIGUSTRUM Germanicum. *Bauh. Pin.* 475. *Ger. em.* p. 1394 *Parkinſon.* p. 1446. *Raii Syn.* p. 465. Privet or Prim.

FRUTEX ſepedalis circiter, ramoſus, cortex ex cinereo vireſcens, punctis plurimis ſparſis prominulis exaſperata: rami oppoſiti, junioribus flexilibus, purpuraſcentibus.	A SHRUB, uſually about ſix feet high, branched, the bark of a greeniſh-aſh colour, irregularly ſprinkled with numerous prominent points; branches oppoſite, the young ones flexible and purpliſh.
FOLIA oppoſita, breviſſime petiolata, ovato-lanceolata, utrinque glabra, integerrima, inferioribus ad exortum ramulorum minoribus.	LEAVES oppoſite, ſtanding on very ſhort foot-ſtalks, ovato-lanceolate, ſmooth on each ſide, perfectly entire, the lower ones at the bottoms of the ſmall branches leaſt.
FLORES albi, odorati, paniculati.	FLOWERS white, ſweet-ſcented, forming a panicle.
PANICULA biuncialis, denſa, ſubpyramidata.	PANICLE about two inches in length, cloſe and ſomewhat pyramidal.
RAMI paniculæ ut pedicelli ad lentem villoſi.	BRANCHES of the panicle, as well as the flower-ſtalks, villous when magnified.
CALYX: PERIANTHIUM monophyllum, minimum, hæmiſphæricum, albidum, ore quadridentato, dentibus erectis, minimis, *fig.* 1.	CALYX: a PERIANTHIUM of one leaf, very ſmall, hemiſpherical, and whitiſh, the mouth having four teeth, which are upright and very minute, *fig.* 1.
COROLLA monopetala, infundibuliformis, alba, cito rufeſcens. *Tubus* cylindraceus, longior calyce. *Limbus* quadripartitus, patens, laciniis ovatis craſſis, obtuſis, *fig.* 2.	COROLLA of one petal, funnel-ſhaped, white, ſoon changing to a reddiſh-brown colour. The *tube* cylindrical, longer than the calyx. *Limb* deeply divided into four ſegments, which are ſpreading, ovate, thick, and obtuſe, *fig.* 2.
STAMINA: FILAMENTA duo, oppoſita, breviſſima, alba. ANTHERÆ majuſculæ, erectæ, longitudine fere corollæ. POLLEN flaveſcens, *fig.* 3.	STAMINA: two FILAMENTS, oppoſite, very ſhort and white. ANTHERÆ rather large, upright, almoſt the length of the corolla. POLLEN yellowiſh, *fig.* 3.
PISTILLUM: GERMEN ſubrotundum. STYLUS filiformis, albus, ſuperne paululum incraſſatus. STIGMA obtuſum, craſſiuſculum, vix manifeſte bifidum, *fig.* 4.	PISTILLUM: GERMEN roundiſh. STYLE filiform, white, a little thickened above. STIGMA obtuſe, thickiſh, ſcarce perceptibly bifid, *fig.* 4.
PERICARPIUM: BACCA globoſa, glabra, nigra, unilocularis, *fig.* 5.	SEED-VESSEL: a round, ſmooth, ſhining, black, berry of one cavity, *fig.* 5.
SEMINA tria ſive quatuor, hinc convexa, inde angulata, *fig.* 6.	SEEDS three or four, convex on one ſide, and angular on the other, *fig.* 6.

Previous to the publication of the *Flora Japonica* by Profeſſor THUNBERG*, the preſent celebrated ſucceſſor to the immortal LINNÆUS, Botaniſts were acquainted with one ſpecies of Liguſtrum only. That gentleman deſcribes another, to which he gives the name of *japonicum*, and characteriſes the two in the following manner:

Liguſtrum vulgare foliis ovatis obtuſis, panicula ſimpliciter trichotoma.

Liguſtrum japonicum foliis ovatis acuminatis panicula decompoſiti trichotoma.

In point of utility, not to ſay ornament, few of our Engliſh or even foreign ſhrubs exceed the common Privet. Its chief uſe is to form ſuch hedges as are required in the dividing of gardens for ſhelter or ornament; the Italian or ever-green Privet, as it is called, which is only a variety of the common ſpecies, is uſually preferred for this purpoſe. The Privet bears clipping admirably well; is not liable to be disfigured by inſects, and having roots formed only of fibres, it robs the ground leſs than almoſt any other ſhrub. It is found to thrive better in the ſmoke of great cities than moſt others; ſo that whoever has a little garden in ſuch places, and is deſirous of having a few plants that look green and healthy, may be gratified in the Privet, becauſe it will flouriſh and look well there. MILLER ſays it will grow well under the ſhade and drip of trees.

The beſt mode of raiſing Privet is from ſeeds, though it is capable of being propagated by layers and cuttings.

The Privet is not apt to be eaten by cattle, and the *Sphinx Liguſtri*, or *Privet Hawk Moth*, one of the largeſt as well as the moſt beautiful inſects we have, is almoſt the only one that feeds on it in its Caterpillar ſtate. There are few gardens having Privet in which this Caterpillar may not be found in the months of Auguſt and September. The readieſt way of diſcovering it is by its dung, which is ſufficiently viſible under thoſe ſhrubs on which it feeds. The *Meloe veſicatorius*, commonly known by the name of Cantharides, or Bliſter-beetle, is found alſo on the leaves of this ſhrub. The berries of the Privet continue on the plant till ſpring advances, and in times of ſcarcity are eaten by different ſorts of birds; but by none with ſo much avidity as the *Bulfinch (Loxia Pyrrhula)*. Bird-catchers who know this, often catch them in the following manner: they take ſome large boughs of the Privet in berry, ſtick them into the ground where Bulfinches frequent, lime the top twigs, and place a call bird underneath.

The berries are alſo recommended in dying, colouring of wines, and as affording a purple colour to ſtain prints; but for theſe ſeveral purpoſes there are much better materials in common uſe.

It uſually grows in woods and hedges; is not nice in its ſoil or ſituation, but flouriſhes moſt in a moiſt ſoil; flowers in July, and ripens its berries in Autumn.

It is found with three leaves at a joint, with variegated leaves, and white berries. HALLER.

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[*] Caroli Petri Thunberg Flora Japonica, Lipſiæ 1784.

Ligustrum vulgare.

J. Sowerby del. et sculp.

Veronica Anagallis

Jas Sowerby, del.

VERONICA ANAGALLIS. WATER SPEEDWELL.

VERONICA *Lin. Gen. Pl.* DIANDRIA MONOGYNIA.

Cor. Limbo 4-partito, laciniâ infima anguſtiore. *Capſula* bilocularis.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

VERONICA *Anagallis* racemis lateralibus, foliis lanceolatis ſerratis, caule erecto. *Lin. Syſt. Vegetab. p.* 56. *Sp. Pl. p.* 16. *Fl. Suec. n.* 13.

VERONICA foliis lanceolatis ſerratis, glabris, ex alis racemoſa. *Haller hiſt. n.* 553.

VERONICA *Anagallis Scopoli Fl. Carn. n.* 12.

ANAGALLIS aquatica minor folio oblongo. *Bauh. Pin.* 252.

ANAGALLIS aquatica folio oblongo crenato. *Park.* 1237.

ANAGALLIS aquatica major. *Ger. emac.* 620.

VERONICA aquatica longifolia media. *Raii Syn.* 280. The Middle Long-leav'd Water Speedwell or Brooklime. *Hudſon, Fl. Angl. ed.* 2. *p.* 5. *Lightfoot Fl. Scot. p.* 73.

RADIX annua, fibroſa.	ROOT annual, and fibrous.
CAULIS erectus, pedalis ad bipedalem, teres, ſubanguloſus, glaber, ad baſin uſque ramoſus, inferne purpuraſcens.	STALK upright, from one to two feet high, round, ſlightly angular, ſmooth, branched quite to the bottom, below purpliſh.
FOLIA oppoſita, ſeſſilia, lanceolata, ſæpe ovato-lanceolata, ſerrata, glabra, venoſa, pallide viridia.	LEAVES oppoſite, ſeſſile, lanceolate, often ovato-lanceolate, ſerrated, ſmooth, veiny, of a pale green colour.
FLORES racemoſi, numeroſi, triginta quadraginta aut etiam plures in ſingulo racemo.	FLOWERS growing in racemi, numerous, from thirty to forty, or even more on one racemus.
RACEMI laterales, oppoſiti, longiſſimi, ſuberecti.	RACEMI lateral, oppoſite, very long, nearly upright.
PEDUNCULI ad lentem ſubviſcidi.	FLOWER-STALKS ſomewhat viſcid when magnified.
BRACTEÆ lanceolatæ.	FLORAL-LEAVES lanceolate.
CALYX: PERIANTHIUM quadripartitum, perſiſtens, laciniis ovato-lanceolatis, acutis, lævibus, trinervibus, ſubæqualibus, *fig.* 1.	CALYX: a PERIANTHIUM deeply divided into four ſegments, and permanent, the ſegments ovato-lanceolate, pointed, ſmooth, three-ribb'd, and nearly equal, *fig.* 1.
COROLLA monopetala, rotata, pallide purpurea, laciniâ ſuperiore et duabus lateralibus venis ſaturatioribus ſtriata, *fig.* 2.	COROLLA monopetalous, and wheel-ſhaped, of a pale purple colour, the uppermoſt ſegment and the two lateral ones ſtreaked with deeper veins of the ſame colour, *fig.* 2.
STAMINA: FILAMENTA duo, purpuraſcentia, medio craſſiora; ANTHERÆ concolores; POLLEN album, *fig.* 3.	STAMINA: two FILAMENTS of a purpliſh colour, thickeſt in the middle; ANTHERÆ of the ſame colour; POLLEN white, *fig.* 3.
PISTILLUM: GERMEN viride; STYLUS declinatus, purpuraſcens, ſuperne craſſior; STIGMA obtuſum, *fig.* 4.	PISTILLUM: GERMEN green; STYLE depending, purpliſh, thickened above; STIGMA blunt, *fig.* 4.
PERICARPIUM: CAPSULA bilocularis, ſubinde trilocularis, ſubrotunda, vix emarginata, polyſperma, *fig.* 5.	SEED-VESSEL: a CAPSULE of two cavities, ſometimes three, roundiſh, ſcarcely emarginate, containing many ſeeds, *fig.* 5.
SEMINA plurima, ſubrotunda, minutiſſima, *fig.* 6.	SEEDS numerous, roundiſh, and very minute, *fig.* 6.

The *Veronica Anagallis* is a much more general plant than the *Scutellata*, being found in almoſt every watery ditch, but eſpecially in thoſe which communicate with the Thames, on the edges of which it is alſo extremely common.

It is apt to vary conſiderably according to ſituation; when it grows in ditches that have a conſiderable depth of water, it becomes much taller, the ſtalk is proportionably thicker, and the leaves are apt to be curled; when it grows out of the water, the plant is ſmaller, the leaves are broader, flatter, and of a paler hue; in all ſituations its racemi are remarkably long and full of flowers, and its ſeeds are uncommonly ſmall and numerous.

It bloſſoms from June to September.

The ſeed-veſſels are ſometimes found very much enlarged; on cutting them open a ſmall larva was found in ſome, and a pupa in others, which, on being kept a proper time, produced a ſmall Curculio or Weevil.

VERONICA SCUTELLATA. BOG SPEEDWELL.

VERONICA *Lin. Gen. Pl.* Diandria Monogynia.

Cor. Limbo 4-partito, laciniâ infima anguſtiore. *Capſula* bilocularis.

Raii Syn. Gen. 18. Herbæ fructu sicco singulari flore monopetalo.

VERONICA *ſcutellata* racemis lateralibus alternis: pedicellis pendulis, foliis linearibus integerrimis. *Lin. Syſt. Vegetab. p.* 57. *Sp. Pl. p.* 16. *Fl. Suec. n.* 17.

VERONICA foliis lanceolatis, ſerratis, glabris, ex alis racemoſa. *Haller Hiſt.* 533.

VERONICA *ſcutellata. Scopoli Fl. Carn. n.* 22.

ANAGALLIS aquatica anguſtifolia ſcutellata. *Bauh. Pin.* 252.

VERONICA aquatica anguſtifolia minor. Narrow-leav'd Water Speedwell, or Brooklime. *Raii Syn. p.* 280. *Hudſon. Fl. Angl. ed.* 2. *p.* 5. *Lightfoot Fl. Scot. p.* 74.

RADIX perennis, fibroſa, fuſca.	ROOT perennial, fibrous, of a brown colour.
CAULIS: paulo ſupra terram ſurculi plerumque ſteriles erumpunt, qui humi repunt, caulis florifer ſubereƈtus, debilis, teres, vix anguloſus, glaber, ramoſus, ſemipedalis ad pedalem, baſi etiam aliquando repens.	STALK: juſt above the ground young ſhoots ſpring forth, which are for the moſt part deſtitute of flowers and creep on the earth, the flowering ſtalk is nearly upright, weak, round, ſcarce perceptibly angular, ſmooth, branched, from ſix inches to a foot in height, ſometimes alſo creeping at bottom.
FOLIA oppoſita, ſeſſilia, lineari-lanceolata, glabra, minutim et rariter dentata.	LEAVES oppoſite, ſeſſile, betwixt linear and lanceolate, ſmooth, finely tooth'd, teeth diſtant.
FLORES albi, ſeu pallide carnei, racemoſi.	FLOWERS white, or of a pale fleſh colour, growing in racemi.
RACEMI laterales, plerumque alterni, laxi, flexuoſi, multiflori.	RACEMI lateral, for the moſt part alternate, looſe, crooked, and bearing many flowers.
BRACTEÆ minutæ, lanceolatæ.	FLORAL-LEAVES minute, and lanceolate.
PEDUNCULI capillares, alterni, demum penduli.	FLOWER-STALKS capillary, alternate, finally pendulous.
CALYX: Perianthium parvum, quadripartitum, laciniis ovato-lanceolatis, ſubæqualibus, *fig.* 1.	CALYX: a Perianthium ſmall, deeply divided into four ſegments, which are ovato-lanceolate and nearly equal, *fig.* 1.
COROLLA monopetala, rotata, plerumque alba, laciniâ ſuperiore venis purpureis piƈta, *fig.* 2.	COROLLA monopetalous, wheel-ſhaped, for the moſt part white, the upper ſegment ſtreaked with purple veins, *fig.* 2.
STAMINA: Filamenta duo, medio incraſſata, alba; Antheræ albæ, *fig.* 3.	STAMINA: two Filaments, thickeſt in the middle, white; Antheræ white, *fig.* 3.
PISTILLUM: Germen viride; Stylus declinatus, albus; Stigma obtuſum, flaveſcens, *fig.* 4.	PISTILLUM: Germen green; Style depending, white; Stigma blunt, yellowiſh, *fig.* 4.
PERICARPIUM: Capsula compreſſa, ſuborbiculata, emarginata, bilocularis, polyſperma, ad 16. *fig.* 5.	SEED-VESSEL a Capsule nearly round, flattened, emarginate, of two cavities, containing numerous ſeeds, to 16. *fig.* 5.
SEMINA orbiculata, plana, flava, *fig.* 6.	SEEDS round, flat, and yellow, *fig.* 6.

This ſpecies of Veronica is diſtinguiſhed from the others by ſeveral charaƈters, ſuch as, its place of growth, which is peculiar, it being ſeldom found but on bogs, or the edges of ponds, eſpecially ſuch as we find on heaths and moors, hence we have called it *Bog Speedwell;* the narrowneſs as well as ſmoothneſs of its leaves alſo ſtrikingly diſtinguiſhes it; Linnæus's term of *integerrimus*, as applied to them, is certainly too ſtrong, for they are always toothed, though faintly, and in a ſingular manner; and if theſe charaƈters were not ſufficient, the looſe ſtraggling manner in which the flower ſtalks grow, would at once point out the *Scutellata* as a diſtinct ſpecies.

It is common in the ſituations above deſcribed on moſt of our heaths, and flowers from June to September.

Verónica scutellata.

Jas. Sowerby del et sculp.

Valeriana Locusta. Corn Sallad.

VALERIANA *Lin. Gen. Pl.* Triandria Monogynia.

Cal. 0. *Cor.* 1-petala, baſi hinc gibba, ſupera. *Sem.* 1.

VALERIANA *Locuſta* floribus triandris, caule dichotomo, foliis linearibus. *Lin. Syſt. Vegetab. p.* 73. *Sp. Pl. p.* 47. *Fl. Suec. n.* 36.

VALERIANA foliis oblongis, rariter incifis, corona ſeminis ſimplici, acuminata. *Haller Hiſt.* 214.

VALERIANA *Locuſta. Scopoli Fl. Carn. n.* 46.

VALERIANA campeſtris inodora major. *Bauh. Pin.* 165.

VALERIANELLA arvenſis præcox humilis ſemine compreſſo. *Mor. Umb.*

LACTUCA agnina. *Ger. emac.* 310. *Park.* 812. *Raii Syn. p.* 201. Lamb's-Lettuce or Corn-Sallet. *Hudſon. Fl. Angl. ed.* 2. *p.* 13. *Lightfoot Fl. Scot. p.* 85.

RADIX annua, fibroſa, pallide fuſca.

CAULIS erectus, ſpithamæus, pedalis et ultra, pro ratione loci, teres, angulato-ſtriatus, ſubpubeſcens, tener, ad unum latus ſæpius purpuraſcens, dichotomus.

FOLIA radicalia, plurima, patentiuſcula, ſubſucculenta, glabra, venoſa, ſubrugoſa, obovata, obſolete dentata, caulina oppoſita, ſeſſilia, remota, ad baſin præſertim ciliata, ſuberecta, ſuprema ſubſerrata.

FLORES minimi, cœruleſcentes, corymboſi.

CALYX nullus.

COROLLA longitudine germinis, tubuloſa, ſubviolacea, quinquefida, laciniis rotundatis, patentibus, ſubæqualibus, *fig.* 1.

STAMINA: Filamenta tria, alba, longitudine corollæ. Antheræ parvæ, albæ, *fig.* 2.

PISTILLUM: Germen inferum, nudum, majuſculum, obovatum, viride, utrinque lineâ exaratum, hinc convexum, ſubgibboſum, inde planiuſculum, *fig.* 4. Stylus ſtaminibus paulo brevior. Stigma trifidum, *fig.* 3.

SEMINA plurima, nuda, pallide fuſca, ſubrotunda, acutiuſcula, parum compreſſa, tranſverſim rugoſa, *fig.* 5.

ROOT annual, fibrous, of a pale brown colour.

STALK upright, from four inches to a foot or more in height, according to its place of growth, round, grooved or angular, ſlightly downy, tender, uſually purpliſh on one ſide, dichotomous.

LEAVES next the root numerous, ſomewhat ſpreading, ſlightly ſucculent, ſmooth, veiny, a little wrinkled, inverſely ovate, faintly toothed, thoſe of the ſtalk oppoſite, ſeſſile, remote, at the baſe particularly, edged with hairs, ſomewhat upright, the uppermoſt ones ſlightly ſerrated.

FLOWERS very minute, of a blueiſh colour, growing in a corymbus.

CALYX wanting.

COROLLA the length of the germen, tubular, faintly violet-coloured, divided into five ſegments, which are roundiſh, ſpreading, and nearly equal, *fig.* 1.

STAMINA: three Filaments of a white colour, the length of the corolla. Antheræ ſmall and white, *fig.* 2.

PISTILLUM: Germen placed below the corolla, naked, rather large, inverſely ovate, green, having a narrow groove on each ſide, convex and ſomewhat gibbous on one ſide, flattiſh on the other, *fig.* 4. Style a little ſhorter than the ſtamina. Stigma trifid, *fig.* 3.

SEEDS numerous, naked, of a pale brown colour, roundiſh, a little pointed, ſomewhat flattened, and tranſverſely wrinkled, *fig.* 5.

In treating of the *Valeriana dioica* we had occaſion to notice the extreme inconſtancy of the fructification in this genus; an inconſtancy ſcarcely to be paralleled in any other tribe, and affecting not only the Linnæan ſyſtem, as depending on number of ſtamina, but ſuch ſyſtems alſo as may be founded on the form of the corolla, or ſtructure of the ſeed. In the *officinalis*, *dioica*, and ſeveral other valerians, the ſeeds are furniſhed with a pappus or down, here they are altogether naked.

The preſent plant is a well known culinary one; the radical leaves are in general uſe in the ſpring to mix with other ſallad herbs, and ſometimes eaten alone: the French call them *Salad de Preter*, from their being generally eaten in Lent.

It grows wild in corn fields, on walls, banks, and in gardens. In corn-fields it is uſually very ſmall, grows with a ſingle ſtem, and often occurs with diſeaſed heads, occaſioned by ſome inſect. The leaves are ſometimes more than uſually ſerrated. A variety of this ſort is made a ſpecies of by Ray. There are ſeveral other varieties mentioned by Linnæus in his *Species Plantarum*, which have not come under our obſervation.

It flowers in May, and ripens its ſeed in June.

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[illegible]

Valeriana Locusta

5

Alopecurus pratensis.

ALOPECURUS PRATENSIS. MEADOW FOXTAIL-GRASS.

ALOPECURUS *Lin. Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. 2-valvis *Cor.* 1-valvis.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

ALOPECURUS *pratenſis* culmo ſpicato erecto, glumis villoſis; corollis muticis. *Lin. Syſt. Vegetab.* p. 93. *Sp. Pl.* p. 88. *Fl. Suec.* 20.

ALOPECURUS ſpica ovata. *Haller. Hiſt. n.* 1539.

GRAMEN phalaroides majus ſive italicum. *Bauh. pin.* 4.

GRAMEN alopecuroides majus. *Ger. emac.* 10.

GRAMEN phalaroides majus. *Parkins.* 1164.

GRAMEN alopecuro ſimile glabrum cum pilis longiuſculis in ſpica oniocordon mihi denominatum. *I. B.* II. *Raii Syn.* p. 396. The moſt common Foxtail-graſs. *Hudſon. Fl. Angl. ed.* 2. p. 27. *Lightfoot Fl. Scot.* p. 91. *Schreb. Gram.* 133. *t.* 19. *f.* 1.

RADIX perennis, fibroſa, fibris pallide fuſcis.	ROOT perennial and fibrous, the fibres of a pale brown colour.
CULMI ſeſquipedales, bipedales, et haud infrequenter tripedales, erecti, teretes, ſtriati, læves, ad baſin purpurei, radicantes.	STALKS a foot and a half, two feet, and not unfrequently three feet high, upright, round, finely grooved, ſmooth, at bottom purple, and tilluring.
FOLIA palmaria, ſeu ſpithamea, ſenſim in acutum mucronem terminata, glabra, ſtriata, parte ſuperna et ad margines ſi digiti deorſum ducantur aſpera, lineam unam cum dimidia communiter aut duas fere lata. *Vaginæ* ſtriatæ, læves, in ſuperiore parte culmi inflatæ. *Membrana* brevis, obtuſa.	LEAVES a hand's breadth or ſhort ſpan in length, gradually tapering to a point, ſmooth, ſtriated, if drawn backward acroſs the fingers feeling rough on the upper ſide and on the edges, commonly a line and a half or almoſt two in breadth. *Sheaths* ſtriated, ſmooth, on the upper part of the ſtalk inflated. *Membrane* ſhort and blunt.
SPICA ſeſquiuncialis, biuncialis, duas etiam nonnunquam cum dimidia uncias longa, duas treſque lineas lata, teres, cylindracea, obtuſa, mollis.	SPIKE an inch and a half, two inches, and ſometimes even two inches and a half long, and two or three lines broad, round, cylindrical, blunt and ſoft.
SPICULÆ unifloræ, compreſſæ, utrinque ciliatæ, nervoſæ, mucronato-tridentatæ, *fig.* 1.	SPICULÆ one flower in each, flat, each ſide edged with hairs, ribbed, ſlightly tridentate, the middle point longeſt, *fig.* 1.
CALYX: *Gluma* bivalvis, uniflora, valvulis ſubæqualibus, ovato-lanceolatis, concavis, compreſſis, trinervibus, nervis piloſis, *fig.* 2.	CALYX: a *Glume* of two valves, containing one flower, the valves nearly equal, ovate and pointed, flattened, three-ribbed, the ribs hairy, *fig.* 2.
COROLLA univalvis, *valvula* concava, longitudine calycis, albida, ſubdiaphana, ſuperne nervis tribus viridibus inſignita, ariſtata; *ariſta* calyce duplo fere longiore, dorſo valvulæ verſus baſin inſerta, *fig.* 3.	COROLLA of one valve, the valve hollow, the length of the calyx, whitiſh, ſomewhat tranſparent, marked on the upper part with three green ribs, and bearded; the *beard* or awn almoſt as long again as the calyx, inſerted into the back of the valve towards the baſe, *fig.* 3.
STAMINA: FILAMENTA tria, capillaria. ANTHERÆ oblongæ, utrinque bifurcæ, plerumque purpuraſcentes, demum ferrugineæ, *fig.* 4.	STAMINA: three capillary FILAMENTS. ANTHERÆ oblong, forked at each end, for the moſt part purpliſh, finally ferruginous, *fig.* 4.
PISTILLUM: GERMEN ovatum, minimum. STYLI duo, villoſi, reflexi, calyce longiores. STIGMATA ſimplicia, *fig.* 5.	PISTILLUM: GERMEN ovate, very minute. STYLES two, villous, reflexed, longer than the glumes of the calyx. STIGMATA ſimple, *fig.* 5.
SEMEN ovatum, minimum, glumis tectum, *fig.* 6, 7.	SEED ovate, very minute, covered by the glumes, *fig.* 6, 7.

In a former number of this work, containing the *Feſtuca fluitans*, we gave a copious extract from that excellent work on Graſſes, the *Beſchreibung der Graſer* of Profeſſor SCHREBER: we now preſent our readers with an abridged account from the ſame author of another graſs, apparently of much greater conſequence in agriculture.

The Meadow Foxtail-graſs is chiefly an inhabitant of the northern part of our moderate zone, being found abundantly in moſt parts of Germany, Holland, France, England, Denmark, Norway, Sweden, and Ruſſia. Profeſſor GMELIN has alſo found it plentifully in Sibiria.

Though the graſſes in general are not ſo ſtrongly attached to particular ſituations as many plants are, yet they are always more abundant, and ſuperior in goodneſs, in ſome one kind of ground than another. The Meadow Fox-tail loves a meadow ground ſomewhat low, and moderately wet, with a good ſoil, though it will alſo grow in dry, and even in quite wet ground; yet, in the firſt, it remains poor, ſmall, and diſappears by little and little, while, in the latter, other graſſes are apt to overpower and ſupplant it.

In

In ſuch diſtricts of Saxony as are celebrated for the goodneſs of their meadows, it always makes a conſiderable part of the hay; and the ſame remark has been made by Mr. **Stillingfleet** and Profeſſor **Kalm** in England, reſpecting the beſt meadows about London.

The Meadow Foxtail is one of thoſe graſſes which appear firſt in the ſpring, and ſometimes blow twice in the ſame year[*]. In reſpect to flowering, it obſerves nearly the ſame time as the *Anthoxanthum odoratum*. In Germany it puts forth its ſilvery ſpikes about the beginning of May[†], when the ſeed is ripe, which with us takes place before hay-making[‡], the ſpike remains unchanged in its ſhape for ſome time; the little huſks containing the ſeed may eaſily be ſtripped off, but fall off very ſlowly of themſelves.

Experience proves that the Meadow Foxtail-graſs has a power of vegetating quickly. Its ſhoots proceed with ſuch vigour, that it may very well be cut three times in a year. Its ſtalks are ſtrong, and provided with large leaves, which are ſoft and juicy. Their taſte is as that of good fodder-graſs ought to be, ſweetiſh and agreeable, having, when made into hay, neither the hardneſs of ſtraw, nor the roughneſs or unpleaſant taſte attendant on ſome of the other graſſes; we may therefore conſider it as holding the firſt place among the good graſſes, either uſed as freſh fodder, or made into hay, eſpecially for the larger cattle. Though the ſheep in ſuch meadows as abound with this graſs, do not improve in the fineneſs of their wool, yet they give a preference to it, both green and dried. On the whole, we may with truth aſſert, that hay is better in proportion to the quantity of Meadow Foxtail-graſs there is among it; not to mention that ſuch hay has the advantage in the weight, and conſequently goes farther than hay made of the finer graſſes.

In the northern countries, Sweden eſpecially, the meadows are frequently laid waſte by a moſt deſtructive caterpillar, which produces a moth called, by **Linnæus**, *Phalena graminis*: it has been diſcovered, that the *Alopecurus pratenſis* remains untouched by this deſtructive inſect; ſo far, therefore, from injuring this graſs, it gives it an opportunity, by weakening and deſtroying the others, to extend itſelf farther; but though its particular taſte or forward growth exempts it from the ravages of this ſpecies of caterpillar, there is another which is particularly fond of it, *viz.* the *Phalena potatoria*, yet as this feeds ſingly on its foliage, and never increaſes greatly, it ſuffers little from it[§].

As this graſs, therefore, appears to be our author of ſo much conſequence in the making and improving of meadows and paſtures, he proceeds to give ſome account how this improvement may be effected.

In this buſineſs the firſt thing of moment, he obſerves, is the neceſſary choice and preparation of the ground; if that be in the power of the cultivator, and as the Meadow Foxtail is found neither to thrive in a ſoil that is quite dry, or quite wet, he prefers a wet one rendered moderately dry by draining.

After procuring a piece of ground naturally fit, or rendered ſo by art, he recommends it to be ploughed up immediately after harveſt, before the wet ſeaſon ſets in, in which ſtate it is to remain all the winter; the froſt breaking the clods, renders it fit for ſowing on in the ſpring, at which time you muſt throw in your ſeeds of the Meadow Foxtail, mixed with other proper paſture herbs[||], together with a crop of oats[¶]; the latter, when ſufficiently grown, may be cut for fodder.

A meadow, thus improved, requires all the care neceſſary in the management of meadows; in particular, a copious watering after hay-making, if the ſeaſon prove unuſually dry, muſt not be omitted. If after ſome years the ſoil ſhould become bound, or noxious plants increaſe in ſuch a manner as to make the meadow leſs productive, which often happens when the ſoil or ſituation is unfavourable, the meadow muſt be broken up and freſh ſown.

The procuring of the ſeed, requiſite even for a tolerably large ſowing, is attended with but little difficulty, if we can only get ſome ſlips or roots of this graſs. The great number of ſeeds which grow upon one ſpike, of which more than one ſpring from each ſlip; the double crop in one ſummer, and the rapid growth of this graſs, evince this ſufficiently. The gathering of the ſeed itſelf is very eaſy; it needs only to be ſtripped off with the hand, and put in a bag, and if there be a large quantity together, ſpread out and dried, even the hay-ſeed of ſuch meadows as abound with Meadow Foxtail is uſeful in ſowing; but we muſt well obſerve how it is mixed: good hay-ſeed ſhould contain a greater proportion of graſs-ſeeds than of other herbs; the latter muſt be eſculent and nutritive, without any mixture of hard, woody, or ſucculent ones, which corrupt the hay; much leſs ſhould it contain taſteleſs, acrid, or poiſonous plants. But it may be aſked, where is ſuch hay-ſeed to be obtained? Certainly the meadows are rare which contain a mixture of proper plants unadulterated with noxious ones; hence the beſt method will be to collect ſeparately the ſeeds of the moſt uſeful graſſes and meadow plants, to increaſe them ſingly, to compound the hay-ſeed of them, and to ſow therewith, at firſt, ſmall meadows, from whence we may, in proceſs of time, obtain a ſufficient ſtock of ſeed for a more general cultivation.

[*] This diſpoſition of graſſes to flower more than once in the ſame year, is perhaps deſerving of more attention than may have hitherto been paid to it. We have noticed it to take place ſtrongly in the preſent graſs, the yellow Oat, the tall Oat, and ſome others; on the contrary, there is one graſs, *viz.* the *Poa pratenſis*, already figured, which we have never obſerved to ſhew the leaſt diſpoſition to throw up a flowering ſtem twice in the ſame year. While this may ſerve as an additional character, whereby it may be diſtinguiſhed from the *Poa trivialis*, it may alſo recommend it as a ſuitable graſs for extenſive lawns, where bents are troubleſome, and offend the eye. We obſerved, in treating of the *Poa pratenſis*, that its root was of the creeping kind; it will probably be found, that all thoſe graſſes which have that ſort of root flower but once in a ſeaſon; and if we conſider a creeping root as ſimilar in its œconomy to a bulb, we ſhall not be at a loſs to account for it.

[†] Its uſual time of flowering with us.

[‡] In the neighbourhood of London, hay-making generally commences three or four weeks ſooner than it does fifty miles from town. Whether this practice hath ariſen from the richneſs of ſoil accelerating the growth of the herbage, or from the meadows abounding more with early graſſes, it may perhaps be difficult to determine; but certainly, by this practice, we reap all the advantages from thoſe early graſſes which are loſt by longer delay; and hence the ſeeds of our hay-lofts muſt be proportionably better than thoſe at a diſtance, as early graſs is preferable to late.

[§] In the papers of the Bath Agricultural Society, vol. II p. 79. the Rev. Mr. Swayne of Puckle Church, in Glouceſterſhire, gives an account of a very minute inſect, which, feeding within the huſks of the ſpikes, renders them barren; we ſhall quote his own words. "On rubbing out the "huſks, when I judged the ſeed to be approaching to ripeneſs, I found almoſt every ſeed-veſſel occupied by a ſoft ſubſtance, of a deep yellow or "orange colour, no ways reſembling a ſeed. On applying the microſcope, this ſubſtance proved to be a congeries of animalcules, which being ſhook "out on a ſheet of white paper, and ſeparated from each other, diſplayed the exact ſhape and motion of thoſe inſects which are oftentimes found in "hams and bacon, and which are known among houſewives by the name of hoppers. The flies likewiſe, which theſe caterpillars produce, were "found to be very like the hopper flies, only infinitely ſmaller."

[||] We ſhould prefer the latter end of Auguſt, or beginning of September, for the purpoſe of ſowing graſs ſeeds, provided the ſeaſon proved favourable.

[¶] Should the land intended to be laid down be very foul, we apprehend, repeated ploughings and harrowings, and that for more than one ſeaſon, would be neceſſary. Farmers are divided in their opinions reſpecting the propriety of ſowing Oats or Barley with graſs-ſeeds; ſome apprehending, that the corn does the young graſs more harm by robbing it of its nouriſhment, than the ſhade or ſhelter afforded thereby does it good.

Alopecurus geniculatus

ALOPECURUS GENICULATUS. JOINTED FOX-TAIL GRASS.

ALOPECURUS *Lin. Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. 2-valvis. *Cor.* 1-valvis.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

ALOPECURUS *geniculatus* culmo ſpicato infracto, corollis muticis, *Lin. Syſt. Vegetab. p.* 93. *Sp. Pl.* 89. *Fl. Suec. n.* 60. *Haller. hiſt. n.* 1541.

ALOPECURUS *geniculatus* culmo adſcendente, ſpica cylindrica, glumis apice divergentibus piloſis. *Hudſon Fl. Angl. ed.* 2. *p.* 27.

ALOPECURUS *geniculatus Scopol. Fl. Carn. n.* 82.

GRAMEN aquaticum geniculatum ſpicatum. *Bauh. pin.* 3. *Scheuchz. Agroſt.* 72.

GRAMEN fluviatile ſpicatum. *Ger. emac.* 14.

GRAMEN aquaticum ſpicatum. *Parkinſ.* 1373. *Raii Syn.* 396. Spiked Flote Graſs. *Lightfoot, Fl. Scot. p.* 92. *Oeder Fl. Dan.* 564.

RADIX perennis, fibroſa, fibris albicantibus, et quandoque ſubfuſcis.	ROOT perennial, fibrous, the fibres whitiſh, ſometimes inclined to brown.
CULMI plures, pedales, ſeſquipedales et ultra, inferne procumbentes, et ſæpe repentes, ſuberecti, geniculati, infracti, ramoſi, ſuperne nudi, ſtriati, præſertim in ſolo arido plus minus bulboſo.	STALKS ſeveral, a foot, a foot and a half or more in length, below procumbent, and often creeping, nearly upright, jointed, crooked, above naked and ſtriated, branched, the baſe eſpecially in a dry ſoil more or leſs bulbous.
FOLIA duo aut tres lineas lata, ſtriata, ſuperne digitis deorſum ductis aſpera, inferne lævia, ſuperiora brevia, uncialia aut biuncialia, patentia, ſæpe ad margines criſpa; *membrana* ad baſin folii ovata, acuta; *vaginæ* læves, ſtriatæ, ventricoſæ.	LEAVES two or three lines broad, ſtriated, the upper ſide if drawn backwards betwixt the fingers rough, the under ſide ſmooth, the uppermoſt leaves ſhort, an inch or two inches long, ſpreading, often crimpt at the edges; the *membrane* at the baſe of the leaf, ovate and pointed, the *ſheaths* ſmooth, ſtriated, and bellying out.
SPICÆ unciales, ſeſquiunciales et ultra, ſubcylindraceæ, forma et colore maxime variantes, nunc obtuſæ nunc ad apicem ſenſim attenuatæ, vireſcentes, purpuraſcentes, aut etiam nigricantes procul ſaltem viſæ.	SPIKE an inch, an inch and a half or more in length, ſomewhat cylindrical, varying greatly both in form and colour, ſometimes blunt, and ſometimes tapering to a point, greeniſh, purpliſh, and even blackiſh, at leaſt when viewed at a diſtance.
FLOSCULI imbricati.	FLORETS imbricated.
CALYX: GLUMA uniflora, bivalvis, compreſſa, valvulis oblique truncatis, pubeſcentibus, trinerviis, carina ciliata, *fig.* 1.	CALYX: a GLUME of two valves, containing one flower, flattened, the valves obliquely truncated, downy, three-ribb'd, the keel ciliated, *fig.* 1.
COROLLA: GLUMA univalvis, oblonga, ovata, truncata, quinquenervis, pellucida, nuda, ariſtata, *fig.* 2. *Ariſta* juxta baſin exſerta corolla duplo longiore, *fig.* 3.	COROLLA: a GLUME of one valve, oblong, ovate, truncated, five-rib'd, pellucid, without hairs, and bearded, *fig.* 2. the *Beard* or awn proceeding from near the baſe, and twice the length of the corolla, *fig.* 3.
STAMINA: FILAMENTA tria, corollâ longiora; ANTHERÆ oblongæ, primum purpureæ, demum ferrugineæ, *fig.* 4.	STAMINA: three FILAMENTS, longer than the corolla; ANTHERÆ oblong, at firſt purple, afterwards ferruginous, *fig.* 4.
PISTILLUM: GERMEN ſubrotundum; STYLI duo, cirrhoſi, albidi, extra calycem protenſi, *fig.* 5.	PISTILLUM: GERMEN roundiſh; STYLES two, ſlender, feathery, and extended beyond the calyx, *fig.* 5.

It is in the depreſſed parts of meadows, where water is occaſionally apt to ſtagnate, that this ſpecies of Fox-Tail Graſs particularly delights to grow, nor is it unfrequent on the edges of ponds, ſtreams, and wet ditches, where it often makes its way into the water; it is alſo, though more rarely, found in dry paſtures; and, according to theſe ſeveral ſituations, it is found to vary.

In the firſt, the ſtalks are procumbent at the baſe, ſpread themſelves on the ground, and extend a foot or more in length; before they riſe upwards, the ſpikes often aſſume a blackiſh or deep purple colour, which cauſes it to be noticed by the Farmer, who diſtinguiſhes it by the name of Black Graſs*. In the ſecond, it is very much enlarged in its ſize, and approaches near to the *Alopecurus pratenſis;* but the ſtalk ſtill retains towards the bottom its crooked appearance. In the third, it grows more upright, the ſpike becomes much ſlenderer, and the baſe of the ſtalk often ſwells out into a kind of bulb, as in the *Avena elatior*, and this variety has been called *Alopecurus bulboſus;* in all theſe ſeveral varieties, the *geniculatus* cannot eaſily be miſtaken for any other ſpecies of Alopecurus.

It flowers in June.

Cattle eat it readily, neverthele∫s it cannot be recommended as a profitable Graſs; nor do the more obſerving Farmers conſider it as ſuch: indeed, where ſuch Graſs is apt to abound, the beſt practice would be to fill up the depreſſions, and ſow the ground with better Graſſes.

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* The Farmer alſo diſtinguiſhes the *Alopecurus agreſtis* (*myoſuroides, Fl. Lond.*) by the name of Black Graſs.

17

Bromus giganteus.

[illegible] del. et sculp.

BROMUS GIGANTEUS. TALL BROME GRASS.

BROMUS *Lin. Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. 2-valvis. *Spicula* oblonga, teres, diſticha: ariſta infra apicem.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

BROMUS *giganteus* panicula nutante, ſpiculis quadrifloris: ariſtis brevioribus. *Lin. Syſt. Vegetab. p.* 103. *Spec. Plant. p.* 114. *Fl. Suec. n.* 34.

BROMUS *giganteus* panicula ramoſa nutante, ramis binatis, ſpiculis ſubquadrifloris ariſta brevioribus. *Hudſon Fl. Angl. p.* 51.

BROMUS glaber, locuſtis quadrifloris nutantibus, ariſtis longiſſimis. *Haller. hiſt. n.* 1510.

BROMUS *giganteus.* *Scopoli Fl. Carn. n.* 116. VAR. 1. *glabra et minor.*

GRAMEN bromoides aquaticum latifolium, panicula ſparſa tenuiſſime ariſtata. *Scheuchz. Agroſt. p.* 264. *t.* 5. *fig.* 17.

GRAMEN ſylvaticum glabrum, panicula recurva. *Vaill. Paris, p.* 93.

GRAMEN avenaceum glabrum, panicula e ſpicis raris ſtrigoſis compoſita, ariſtis tenuiſſimis. *Raii hiſt.* 1909. *Syn. p.* 415. *Lightfoot Fl. Scot. p.* 104.

RADIX perennis, fibroſa.	ROOT perennial and fibrous.
CULMUS tripedalis et ultra, erectus, lævis, geniculis plerumque purpureis.	STALK three feet or more in height, upright, ſmooth, the joints for the moſt part purple.
FOLIA ſemunciam lata, læte viridia, lævia, inferne nitida, baſi appendiculis ex fuſco purpureis utrinque, caulem amplexantibus inſtructa, *vagina* inferne ſcabriuſcula, minime piloſa, ſuperne glabra, *membrana* breviſſima.	LEAVES half an inch broad, of a bright-green colour, ſmooth, ſhining underneath, furniſhed at the baſe on each ſide with two purpliſh-brown appendages, which embrace the ſtalk, *ſheath* below a little rough to the touch, but not hairy, above ſmooth, the *membrane* very ſhort.
PANICULA ampla, pedalis etiam, ſparſa, ramis plerumque binatis, nutantibus, ſecundis, ſcabriuſculis.	PANICLE large, even a foot long, looſe, branches generally growing in pairs, all one way, drooping, and roughiſh.
SPICULÆ ovato-lanceolatæ, ſubquinquifloræ, ſemunciales, plerumque virides, læves, ariſtatæ: *Ariſtæ* albæ, ſpiculis paulo longiores, flexuoſæ, ſcabræ.	SPICULÆ ovato-lanceolate, containing about five flowers, half an inch in length, for the moſt part green, ſmooth, and bearded: *Beards* white, a little longer than the ſpiculæ, crooked, and rough.
CALYX: GLUMA bivalvis, valvulis inæqualibus, acuminatis, viridibus, marginibus albidis, majore lineis tribus, minore unica ſubdiaphana notata, *fig.* 1.	CALYX: a GLUME of two valves, the valves unequal, pointed, green, with white edges, the large valve marked with three, and the ſmall one with one ſomewhat tranſparent line, *fig.* 1.
COROLLA: GLUMA bivalvis, valvulis ſubæqualibus, viridibus, lævibus, margine albis, exteriore majore, concava, obſolete trinervis, ariſtata, ariſtâ glumâ longiore paulo infra apicem exſertâ, interiore minore, planiuſcula, albida, *fig.* 2, 3.	COROLLA: a GLUME of two valves, the valves nearly equal, green, ſmooth, the edges white, the outer one largeſt hollow, faintly three-rib'd, and bearded, the beard longer than the glume, and proceeding from a little below the point, the interior one leaſt, ſomewhat flat and whitiſh, *fig.* 2, 3.
NECTARIUM: GLUMULÆ duæ, accuminatæ, ad baſin germinis, *fig.* 4.	NECTARY: two ſmall pointed GLUMES at the baſe of the germen, *fig.* 4.
STAMINA: FILAMENTA tria, capillaria, alba; ANTHERÆ flavæ, bifurcæ, *fig.* 5.	STAMINA: three capillary, white FILAMENTS; ANTHERÆ yellow and forked, *fig.* 5.
PISTILLUM: GERMEN obovatum, viride, nitidum; STYLI duo, patentes, ad baſin uſque ramoſi, *fig.* 6. auct. *fig.* 7.	PISTILLUM: GERMEN inverſely ovate, green and ſhining; STYLES two, ſpreading and branched quite to the bottom, *fig.* 6. magnified, *fig.* 7.
SEMEN oblongum, ex nigro purpuraſcens, intra glumas adhærentes, incluſum, *fig.* 8, 9.	SEED oblong, of a blackiſh-purple colour, encloſed within the glumes which adhere to it, *fig.* 8, 9.

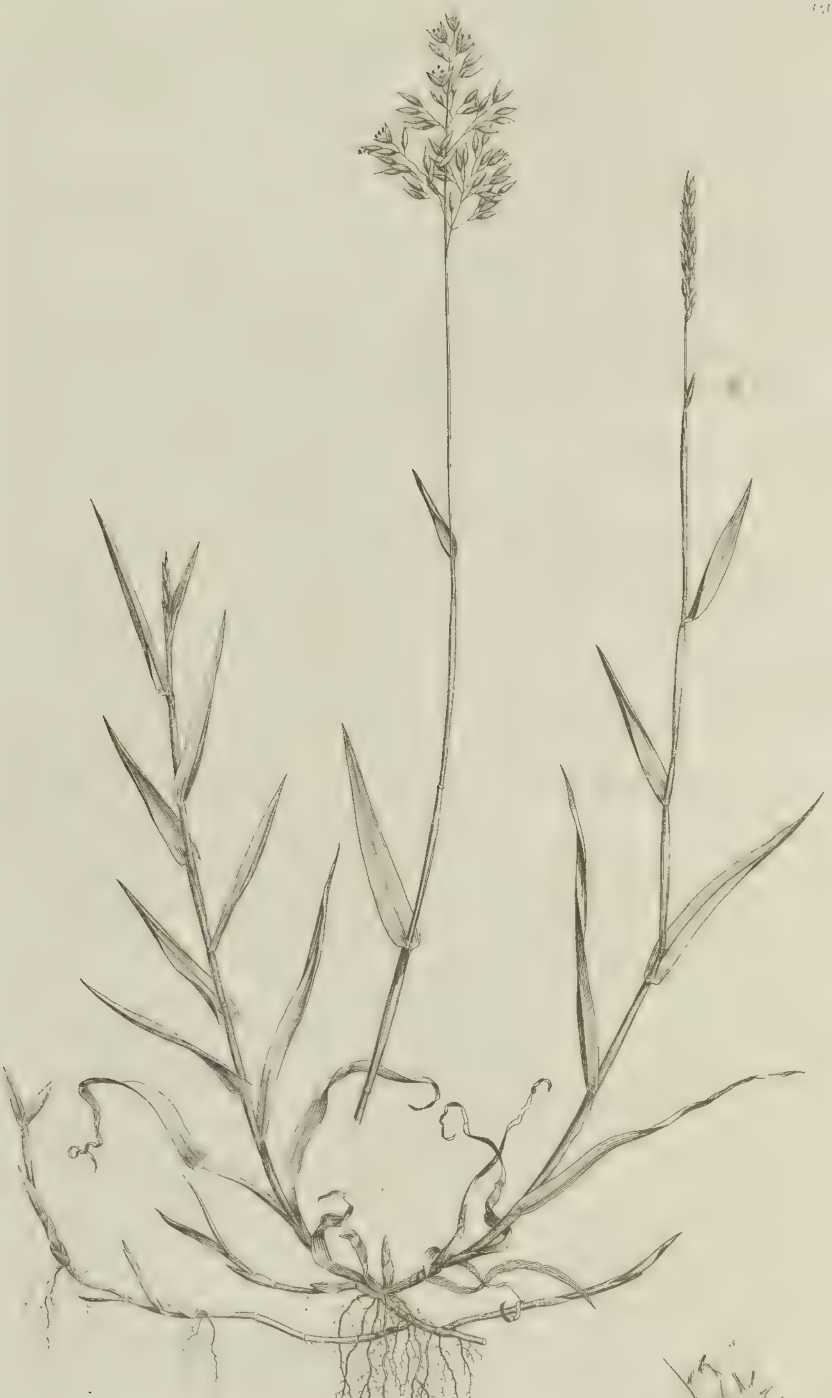
There is only one graſs for which this ſpecies of *Bromus* is liable to be miſtaken, and that is the *Bromus hirſutus* already figured, they are both large graſſes, and grow in ſimilar ſituations, indeed frequently together: they have been confounded by SCOPOLI, who makes the *hirſutus* a variety of the *giganteus;* but the leaſt attention would have taught him, that they were materially different.

The ſheath of the lower leaves in the *hirſutus* is covered with long ſtiff hairs, which are wanting in the *giganteus;* the leaves of the *giganteus* are gloſſy on the under ſide, and thoſe of the ſtalk, near their extremities, appear as if a ſlack ligature had been tied round them; but there is a character almoſt peculiar to this graſs, the baſe of the leaf is terminated by two ſmall appendages, of a reddiſh-brown colour, which uſually embrace the ſtalk, and will never fail to diſtinguiſh it from the *hirſutus:* the ſpiculæ alſo, if no other diſtinguiſhing character were preſent, would be all-ſufficient, being ſhorter by almoſt one half, containing fewer flowers, and having ariſtæ or awns longer in proportion to the ſpiculæ and more crooked: we may add another character which we have diſcovered from cultivation, the *giganteus* is a perennial, whereas the *hirſutus* is only an annual or biennial, a circumſtance which we were not ſufficiently apprized of when we deſcribed that plant.

This graſs is frequent enough in the neighbourhood of London, in woods, and under hedges, eſpecially ſuch as are accompanied by a wet ditch, nor is it uncommon by the ſides of the Thames; the ſituation which it affects with us, is more agreeable to the name given it by SCHEUCHZER, than to the account delivered by LINNÆUS in his *Species plantarum,* where he ſays, *habitat in Europæ ſylvis ſiccis:* we very rarely or never find it in meadows; hence, though a productive graſs, there ſeems not much probability of its becoming a good graſs for meadows or paſtures.

It flowers from July to September.

8



Holcus mollis

HOLCUS MOLLIS. CREEPING SOFT-GRASS.

HOLCUS *Lin. Gen. Pl.* POLYGAMIA MONOECIA.
HERMAPHROD. *Cal.* Gluma 1-ſ. 2-flora. *Cor.* Gluma ariſtata. *Stam.* 3. *Styli* 2. *Sem.* 1.
MASC. *Cal.* Gluma 2-valvis. *Cor.* 0. *Stam.* 3.
HOLCUS *mollis* radice repente, geniculis villoſis, ariſtâ extra ſpiculam productâ.
HOLCUS *mollis* glumis bifloris nudiuſculis: floſculo hermaphrodito mutico; maſculo ariſta geniculata. *Lin. Syſt. Veget. p.* 760. *Sp. Pl. p.* 1485.
GRAMEN caninum longius radicatum majus et minus. *Bauh. Pin.* 1.
GRAMEN paniculatum molle, radice graminis canini repente. *Moriſ. Hiſt.* 3. *p.* 202.
GRAMEN caninum paniculatum molle. *Raii Hiſt.* 1285. *Scheuchz. Agroſt. p.* 235. *Vaill. Pariſ. p.* 87.
GRAMEN miliaceum ariſtatatum molle. *Raii Syn. p.* 404. *Hudſon. Fl. Angl. ed.* 2. *p.* 440. *Lightfoot Fl. Scot. p.* 631. *Schreb. Agroſt. t.* 20.

RADIX perennis, tritici canini inſtar repens.	ROOT perennial, creeping like the garden couch-graſs.
CULMI ſeſquipedales et ultra, ſæpius erecti, folioſi, nodoſi, geniculis albis, lanatis, culmi etiam ſteriles occurrunt ad terram magis reclinati, foliis crebrioribus, alternis, lanceolatis, veſtiti.	STALKS a foot and a half or more in height, moſt commonly upright, leafy, jointed, the joints white and woolly, ſtems alſo ariſe producing no ſpikes, inclined more to the ground, and covered with more numerous, alternate, lanceolate leaves.
FOLIA ad tres vel quatuor lineas lata, molli villo pubeſcentia, membranâ ad baſin folii alba, obtuſa, vagina ſtriata, ſubcarinata, villoſa.	LEAVES three or four lines in breadth, covered with ſoft ſhort hairs, the membrane at the baſe of the leaf white and obtuſe, the ſheath ſtriated, ſomewhat keeled and villous.
PANICULA biuncialis, erecta, inſtante antheſi diffuſa, demum coarctata.	PANICLE two inches in length, upright, during the flowering ſpread out, afterwards cloſed up.
RAMULI paniculæ purpuraſcentes, piloſi.	BRANCHES of the panicle purpliſh and hairy.
SPICULÆ bifloræ etiam trifloræ, *fig.* 3, 4. albidæ ſeu parum purpuraſcentes, floſculis omnibus hermaphroditis.	SPICULÆ containing two, ſometimes three flowers, *fig.* 3, 4. whitiſh, or ſlightly tinged with purple, all the florets hermaphrodite.
CALYX: gluma bivalvis, utrinque ciliata, ceteroquin nuda, valvula alterâ majore et paulo longiore, trinerve, nervis obſcure viridibus, *fig.* 1, 2.	CALYX: a glume of two valves, edged on both ſides with hairs, otherwiſe naked, one of the valves larger and a little longer than the other, having three ribs, of an obſcure green colour, *fig.* 1, 2.
COROLLA: bivalvis, valvulis longitudine ſubæqualibus, baſi piloſis, viridibus, exteriore majore, glabra, gibboſa, interiore plana ad lentem ſubnervoſa, hiſpidula, e dorſo majoris valvulæ ſuperioris floſculi exſurgit ariſta ſpicula longior primo recta, demum tortilis, geniculata, *fig.* 3, 4.	COROLLA of two valves, the valves nearly equal in length, hairy at bottom, of a green colour, the outermoſt largeſt, ſmooth, and gibbous, the innermoſt flat, ſomewhat ribbed when magnified, and a little hiſpid, from the back of the largeſt valve of the uppermoſt flower ariſes an awn, longer than the ſpicula, at firſt ſtraight, laſtly twiſted and bent, *fig.* 3, 4.
STAMINA: FILAMENTA tria, capillaria. ANTHERÆ oblongæ, flavæ, utrinque bifurcæ, *fig.* 5.	STAMINA: three capillary FILAMENTS. ANTHERÆ oblong, yellow, forked at each end, *fig.* 5.
PISTILLUM: GERMEN ſubrotundum, nitidum, minimum. STYLI duo, plumoſi, *fig.* 6.	PISTILLUM: GERMEN roundiſh, ſhining, very ſmall. STYLES two, feathery, *fig.* 6.
NECTARIUM: glumulæ duæ, lanceolatæ, ad baſin germinis, *fig.* 7.	NECTARY: two, ſmall, lanceolate glumes at the baſe of the germen, *fig.* 7.
SEMINA duo, nitida, ovato-acuta, altera ariſtata, altera mutica, glumis calycinis incluſa, *fig.* 8.	SEEDS two, ſhining, ovate, pointed, the one bearded, the other naked, incloſed within the glumes of the calyx, *fig.* 8.

Notwithſtanding this graſs has been well named and deſcribed by ſome of the older Botaniſts, particularly MORISON and RAY, its characters do not appear to be generally well underſtood. Baron HALLER conſiders it as too nearly related to the *lanatus*, to be with propriety conſidered as a diſtinct ſpecies; and Mr. LIGHTFOOT, in his *Flora Scotica*, entertains ſimilar doubts.

We have cultivated the two in ſeparate beds, cloſe to each other, for ſeveral years; have noticed them with a marked attention, where they have grown wild; and, from a variety of characters, are led to conſider them as perfectly diſtinct.

The moſt ſtriking of theſe characters we ſhall here enumerate. In the firſt place they differ widely in their natural places of growth: while the *lanatus* is moſt commonly found in meadows and paſtures, the *mollis* rarely occurs but in woods and its environs. We have, indeed, frequently found the *lanatus*, which is by far the moſt general graſs of the two, in a wood; but we never recollect ſeeing the *mollis* in meadows or paſtures, and but rarely in corn-fields, where it has been ſaid chiefly to grow. *Coomb Wood* in particular affords a ſtrong inſtance of its attachment to ſhady ſituations. Contrary to what ſome authors aſſert, we have ever found the *mollis* the leaſt plant; or, if it has been obſerved equally tall as the other, it has produced by far the moſt ſcanty panicle; nor do the ſpiculæ, in general, aſſume that brilliant colour which ſo eminently diſtinguiſhes thoſe of the *lanatus* on their firſt coming out. But the character which puts its being a ſpecies out of all doubt, is its root; that of the *lanatus* does not creep, while the *mollis* poſſeſſes that property in a degree equal to the ſtrongeſt couch-graſs. The other characters which ſtrikingly diſtinguiſh this ſpecies are its woolly joints and its large pointed ſpiculæ, in which the beard, or awn, is invariably much longer than the glumes of the calyx.

In ſpeaking of the *lanatus* we took notice of the impropriety of ſeparating that graſs from the general maſs, becauſe one of the flowers in each ſpiculæ was imperfect*. The fructification of the preſent ſpecies argues more ſtrongly for its union with the others: here both flowers are hermaphrodite, both have ſtamina and feathery ſtyles, and both produce apparently perfect ſeeds. Indeed we can perceive no character to diſtinguiſh it from an *aira*, to which genus it perhaps with propriety belongs.

SCHREBER's figure gives a good repreſentation of the panicle when cloſed, but neither repreſents the joints or root well.

As we conſider the *Holcus lanatus*, which is much to be preferred to the preſent ſpecies, as a very indifferent graſs for cattle, ſo we cannot but look on the *mollis* as one of the worſt ſpecies of couch; and, if it ſhould ever become a practice to ſow certain woods with graſs ſeeds, this ſpecies ought ſurely to be eradicated.

It flowers in July.

* SCOPOLI, from a circumſtance of this ſort, has in our opinion abſurdly enough placed the *Avena elatior* with the *Holcus*.

9

Hordeum murinum

J.S. del et sculp

HORDEUM MURINUM. WALL BARLEY.

HORDEUM *Lin. Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. lateralis, bivalvis, uniflorus, ternus.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ, FLORE IMPERFECTO CULMIFERÆ.

HORDEUM *murinum* floſculis lateralibus maſculis ariſtatis, involucris intermediis ciliatis. *Lin. Syſt. Vegetab. p.* 108. *Sp. Pl.* p. 126. *Fl. Suec. n.* 113.

HORDEUM ſpicis craſſis, longe ariſtatis, calycinis glumis ariſtatis. *Haller Hiſt. n.* 1536.

HORDEUM *murinum. Scopoli Fl. Carn. n.* 1241.

GRAMEN hordeaceum minus et vulgare. *Bauh. Pin.* 8.

HORDEUM ſpurium vulgare. *Parkinſon* 1147.

GRAMEN ſecalinum et ſecale ſylveſtre. *Ger. emac* 73. *Raii Syn. p.* 391. Wild Rie or Rie-Graſs, Wall-Barley, Way-Bennet. *Hudſon. Fl. Angl. ed.* 2 *p.* 56. *Lightfoot Fl. Scot.* p. 108.

RADIX annua, fibroſa, albida vel ſubfuſca.

CULMI plures, pedales et ſeſquipedales, ſubereĉti, foliosi, baſi procumbentes, infraĉti, geniculati, geniculis majuſculis, pallidioribus.

FOLIA palmaria in quibuſdam etiam ſex uncias longa, duas vel tres lineas lata, ſubglauca, molli pube veſtita, baſi appendiculis duabus albis, acuminatis, amplexicaulibus, inſtruĉta; *membrana* breviſſima, obtuſa; *vagina* vix pubeſcens.

SPICÆ palmares, et ultra, parum nutantes, pallide virentes, compreſſæ, ſpicis hordei diſtichi haud abſimiles.

CALYX: INVOLUCRUM hexaphyllum, triflorum, foliolis ſetaceis, acuminatis, ariſtis corollæ brevioribus, ſcabris, duobus intermediis baſi latioribus, ciliatis, *fig.* 1.

FLOS intermedius hermaphroditus, laterales maſculi, omnibus magnitudine et forma ſimilibus, *fig.* 2. *Flos Hermaphrod.*

COROLLA bivalvis, valvula exterior oblongo-ovata, acuminata, obſolete trinervis, lævis, definens in ariſtam biuncialem ſcabram, *fig.* 4. valvula interior lanceolata, plana, medio ſulcata, apice emarginato-truncata, *fig.* 3. ad baſin exteriorem hujus valvulæ exſertur ariſta reĉta longitudine filamentorum, *fig.* 8.

NECTARIUM: GLUMULÆ duæ, acuminatæ ad baſin germinis, *fig.* 7.

STAMINA: FILAMENTA tria, capillaria, glumis corollæ multo breviora. ANTHERÆ parvæ, e flavo vireſcentes, *fig.* 5.

PISTILLUM: GERMEN ovatum, pubeſcens. STYLI duo, reflexi, villoſi, *fig.* 6.

ROOT annual, fibrous, whitiſh or of a browniſh colour.

STALKS numerous, a foot or a foot and a half high, nearly upright, leafy, procumbent at the baſe, and crooked or broken, jointed, the joints rather large and paler than the ſtalk.

LEAVES a hand's-breadth or in ſome even ſix inches in length, and two or three lines broad, ſomewhat glaucous, and covered with a ſoft down, furniſhed at the baſe with two ſmall, white, pointed appendages, which embrace the ſtalk; *membrane* very ſhort and obtuſe; *ſheath* ſcarcely downy.

SPIKES a hand's-breadth or more in length, drooping a little, of a pale green colour, flat, and not unlike thoſe of common barley.

CALYX: an INVOLUCRUM of ſix leaves, containing three flowers, the leaves running out to a long briſtly point, ſhorter than the beards of the corolla, the two intermediate ones broader at the baſe than the others, and edged with hairs, *fig.* 1.

FLOWER in the middle hermaphrodite, the ſide ones males, all alike in ſize and ſhape, *fig.* 2. *Hermaphrodite Flower.*

COROLLA of two valves, the outer valve oblong-ovate, with a long point, faintly three-ribbed, ſmooth, terminating in a beard or awn, which is rough to the touch, *fig.* 4. the inner valve lanceolate, flat, with a groove, truncated at top, and ſlightly emarginate, *fig.* 3. at the outer baſe of this valve ariſes a ſtraight awn the length of the filaments, *fig.* 8.

NECTARY: two long-pointed, little GLUMES, at the baſe of the germen, *fig.* 7.

STAMINA: three capillary FILAMENTS, much ſhorter than the glumes of the corolla. ANTHERÆ ſmall, of a yellowiſh green colour, *fig*, 5.

PISTILLUM: GERMEN ovate, downy. STYLES two, reflexed, and villous, *fig.* 6.

Some of the graſſes are noxious to the huſbandman in one way, and ſome in another. We have been informed, on the moſt reſpeĉtable authority, that in the Iſle of Thanet this graſs is well known to the inn-keepers, who call it Squirrel-tail Graſs; and find, that if horſes feed on it for ſome time, the beards or awns of the ſpikes ſtick into their gums, and make them ſo ſore, that they are in danger of being ſtarved. The gentleman, who related to me this faĉt, informed me, that on the road he had a bill put into his hand, ſignifying, that at ſuch an inn travellers might depend on having good hay for their cattle, without any mixture of Squirrel-tail Graſs.

It is chiefly on the edges of paths, at the bottoms of walls, and on the borders of fields, that we find this noxious graſs; and in ſuch ſituations it is extremely common in the neighbourhood of London. Fortunately it is ſeldom or never found in the body of paſtures and meadows, and conſequently it rarely occurs in our hay.

It continues to flower and produce ſeed during the greateſt part of the ſummer.

We are carfully to diſtinguiſh it from the *Hordeum pratenſe* of Mr. HUDSON, which LINNÆUS, contraty to the opinion of RAY, VAILLANT, HALLER, and other reſpeĉtable Botaniſts, conſiders only as a variety of the preſent ſpecies.

MELICA UNIFLORA. SINGLE-FLOWERED MELIC-GRASS.

MELICA *Lin. Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. bivalvis, biflorus, rudimentum floris inter floſculos.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

MELICA *uniflora* panicula rara, calycibus bifloris, floſculo altero hermaphrodito, altero neutro. *Retzii Faſc. Obſ. Bot.* 1. p. 10 n. 9.

GRAMEN avenaceum locuſtis rarioribus. *Bauh. Pin.* p. 10.

GRAMEN avenaceum ſpica mutica rariore gluma. *Hiſt. Ox. III. t.* 7. *f.* 49.

GRAMEN avenaceum nemorenſe, glumis rarioribus ex fuſco xerampelinis. *Raii Syn.* p. 403.

GRAMEN avenaceum rariore grano nemorenſe danicum. *Lob. Ad. P. Alt.* p. 465. *ic I. B.* p. 434.

MELICA *nutans* petalis imberbibus, panicula ſecunda nutante, gluma uniflora. *Hudſon. Fl. Angl. ed.* 2. p. 37. *Lightfoot Fl. Scot.* p. 95.

RADIX perennis, fibroſa.

CULMUS ſimplex, ſeſquipedalis et ultra, folioſus, ubi vaginis foliorum tegitur ſubanguloſus, ſcaber, ſtriatus, ad baſin ſordidè purpureus.

FOLIA caulina quinque circiter, e flavo viridia, plana, lineam unam cum dimidia aut duas fere lata, in acutum mucronem ſenſim attenuata, ſi digiti deorſum ducantur aſpera, ſuperne ſubpiloſa, marginibus ad lentem minutiſſime ſerrulatis, membrana breviſſima, vix ulla, at quod valde ſingulare, et notatû dignum, foliolum ovato-acuminatum, erectum, coloratum, ex anteriore parte oris vaginæ oritur, nemine antehac, ne cl. *Retzio* obſervatum, *fig.* 8.

FLORES paniculati.

PANICULA rara, pedunculis inferioribus geminis altero breviore, trifloris, etiam ſeptem aut octo floris in hortis culta, ſuperioribus ſolitariis.

SPICULÆ pedicellatæ, primo atro-purpureæ, muticæ, bifloræ.

CALYX: *Gluma* bivalvis, biflorus, coloratus, nitidus, valvula exteriore majore, ovata, concava, quinquenervi, ſubmucronata, interiore minore, ovato-lanceolata, trinervi, *fig.* 1.

FLOS *hermaphrod.* ſeſſilis, valvula exterior magna, ventricoſa, marginibus interiorem amplectens, quæ planiuſcula, marginibus membranaceis reflexis, præcipue prope baſin, *fig.* 2, 3.

ſterilis pedunculatus, imperfectus, *fig.* 9.; idem evolutus, *fig.* 10.

STAMINA: FILAMENTA tria, capillaria, brevia. ANTHERÆ flaveſcentes utrinque bifurcatæ, *fig.* 4.

PISTILLUM: GERMEN ovatum, glabrum, nitidum, flaveſcens. STYLI duo baſi diſcreta, divaricata. STIGMATA villoſa, *fig.* 5.

NECTARIUM: *Squamula* minima, integra, ad baſin germinis, *fig.* 6.

SEMEN ovatum, nitidum, majuſculum, nigricans, *fig.* 7.

ROOT perennial and fibrous.

STALK ſimple, a foot and a half or more in height, leafy, where it is covered with the ſheaths of the leaves ſomewhat angular, rough and ſtriated, at bottom of a dull purple colour.

LEAVES of the ſtalk about five in number, of a yellowiſh-green colour, flat, a line and a half or almoſt two lines broad, terminating gradually in a point, rough if drawn backwards betwixt the fingers, on the upper ſide ſomewhat hairy, the edges of the leaves when magnified finely ſerrated, the membrane very ſhort, ſcarce any; but what is very remarkable and worthy notice, a ſmall ovate leaf with a long point, upright, and coloured, riſes from the fore-part of the mouth of the ſheath, till now unobſerved even by the celebrated *Retzius*, *fig.* 8.

FLOWERS growing in a panicle.

PANICLE looſe, the lowermoſt flower-ſtalks growing two together, the one ſhorter than the other, bearing three flowers, and even ſeven or eight when cultivated in gardens, the uppermoſt growing ſingly.

SPICULÆ ſtanding on little foot-ſtalks, at firſt of a dark purple colour, beardleſs, each containing two flowers.

CALYX: a *Glume* of two valves, containing two flowers, coloured and ſhining, the outermoſt valve ovate, hollow, having five ribs, and terminated by a ſhort point, the innermoſt leaſt, ovato-lanceolate, and three-ribbed, *fig.* 1.

FLOWER: the *hermaphrodite* one ſeſſile, the outer valve large, bellying out, with its edges embracing the inner one, which is flattiſh, the edges membranous and turned back, eſpecially near the baſe, *fig.* 2, 3.

the *ſterile* flower ſtanding on a foot-ſtalk, and imperfect, *fig.* 9.; the ſame unfolded, *fig.* 10.

STAMINA: three FILAMENTS, capillary and ſhort. ANTHERÆ yellowiſh and forked at each end. *fig.* 4.

PISTILLUM: GERMEN ovate, ſmooth, ſhining, and yellowiſh. STYLES two, ſeparate at bottom and ſpreading out. STIGMATA villous, *fig.* 5.

NECTARY: a very minute, entire ſcale, at the baſe of the germen, *fig.* 6.

SEED ovate, ſhining, rather large and blackiſh, *fig.* 7.

This elegant ſpecies, long ſince noticed and deſcribed by many of the old Botaniſts, particularly RAY, has been overlooked by LINNÆUS. Profeſſor RETZIUS*, in the firſt faſciculus of his botanical obſervations, deſcribes it anew, and gives it the name of *uniflora*, having found each ſpicula to contain only one perfect flower. This name we therefore moſt readily adopt. Mr. HUDSON, in his *Flora Anglica*, has miſtaken this plant for the *nutans* of LINNÆUS; and to the *nutans* has given the name of *montana*.

The delicacy and ſtriking colour of its panicle, joined to its place of growth, readily diſtinguiſhes it from all our other graſſes.

It grows plentifully in moſt of the woods near London, and flowers in May and the beginning of June.

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* Andr. Joh. Retzii Faſciculus Obſervationum Botanicarum primus, cum figuris æneis, Lipsiæ, 1779.

Melica uniflora

MELICA CÆRULEA. BLUE MELIC-GRASS.

MELICA *Lin. Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. 2-valvis, 2-florus. *Rudimentum* floris inter floſculos.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

MELICA *cærulea* panicula coarctata floribus cylindricis. *Lin. Syſt. Vegetab. p.* 113.

AIRA *cærulea* foliis planis, panicula coarctata, floribus pedunculatis muticis convoluto ſubulatis. *Lin. Sp. Pl.* 95. *Fl. Suec. n.* 67.

POA ſpiculis ſubulatis panicula rara contracta. *Fl. Lapp.* 29.

AIRA *cærulea. Scopoli Fl. n.* 91.

GRAMEN arundinaceum enode minus ſylvaticum. *Bauh. Pin.* 7. *Scheuch Agroſt.* 209.

GRAMEN pratenſe ſerotinum, panicula longa purpuraſcente. *Raii hiſt.* 1288. *Moriſ. hiſt.* 3. *p.* 201. *ſ.* 8. *t.* 5. *f.* 22.

GRAMEN pratenſe ſpica Lavendulæ. *Merr. Pin.* 5. *Raii Syn.* 404. *Hudſon. Fl. Angl. ed.* 2. *p.* 33. *Lightfoot Fl. Scot. p.* 96.

RADIX perennis, fibroſa, fibris craſſis, albidis ſeu fuſceſcentibus, flexuoſis, villoſis.	ROOT perennial, fibrous, thick, whitiſh or browniſh, crooked and villous.
CULMUS pedalis, ſeſquipedalis, aut bipedalis, baſi ſub-bulboſus, erectus, unico tantum nodo, eoque prope baſin inſtructo, ſuperne nudus, lævis.	STALK a foot, a foot and a half, or two feet high, ſomewhat bulbous at the baſe, upright, having only one knot, and that near the baſe, above naked and ſmooth.
FOLIA plerumque tria, aut quatuor, palmaria, et ultra, ex cæruleo vireſcentia, latiuſcula, acuminata, rigidula, inferiora plana, ſuperiora ſubconvoluta, ad margines piloſa, *Membrana* nulla, *Vagina* brevis, ſtriata.	LEAVES for the moſt part three or four, about a hand's-breadth in length, of a blueiſh-green colour, rather broad, long-pointed, ſtiffiſh, the lower ones flat, the upper ones ſomewhat rolled up, hairy at the edges, *Membrane* none, *Sheath* ſhort and ſtriated.
FLORES paniculati.	FLOWERS growing in a panicle.
PANICULA palmaris, et ultra, ramoſa, ramis appreſſis, hinc ſubſpicata.	PANICLE a hand's-breadth or more in length, branched, the branches cloſing together ſo as to form a kind of ſpike.
SPICULÆ bifloræ, trifloræ, et quadrifloræ, ſæpius vero trifloræ, *fig.* 1, 2, 3, cum rudimento floſculi in pleriſque, *fig.* 4, 5, juniores compreſſæ, adultæ teretiuſculæ, obtuſæ, paululum divergentes.	SPICULÆ containing two, three, and four flowers, but moſt commonly three, *fig.* 1, 2, 3, with a rudiment of a flower in moſt of them, *fig.* 4, 5, the young ones flattened, the full-grown ones roundiſh,, obtuſe, ſlightly diverging.
CALYX bivalvis, valvulæ ſubæquales, acutæ, carinatæ, ad margines purpureæ, *fig.* 6.	CALYX compoſed of two valves, the valves nearly equal, pointed, keeled, the edges purple, *fig.* 6.
COROLLA bivalvis, valvulæ ſubæquales, exteriore majore, interiorem amplectente, trinerve, ſubmucronatâ, ad margines purpureâ, interiore binerve, pallidiore, obtuſa, paulo breviore, *fig.* 7.	COROLLA compoſed of two valves, the valves nearly equal, the outer one, which is largeſt, embracing the inner one, three-ribb'd, ſlightly pointed, the edges purple, the inner valve two-ribb'd, paler, obtuſe, and a little ſhorter, *fig.* 7.
NECTARIUM: SQUAMULÆ duæ, breviſſimæ, latæ, truncatæ, emarginatæ, *fig.* 8.	NECTARY: two very ſhort, broad, truncated, emarginate SCALES, *fig.* 8.
STAMINA: FILAMENTA tria, capillaria; ANTHERÆ bifurcæ, purpureæ, *fig.* 11.	STAMINA: three capillary FILAMENTS; ANTHERÆ forked at each end, and purple, *fig.* 11.
PISTILLUM: GERMEN minimum, glabrum, ſubovatum; STYLI duo, ramoſi, ad baſin uſque purpurei, *fig.* 9, 10.	PISTILLUM: GERMEN very minute, ſmooth, and ſomewhat ovate; STYLES two, branched down to the bottom, and purple, *fig.* 9. 10.

Our readers, on peruſing the above deſcription, will quickly perceive, that this graſs does not accord, in every reſpect, with the characters of a *Melica;* it has, in general, too many flowers: yet, as the eſſential part, the *rudimentum floſculi,* is found in *moſt* of the Spiculæ, it cannot, perhaps, be more judiciouſly arranged.

LINNÆUS, at different periods, appears to have entertained a different opinion of it: in his *Flora Lapponica,* he conſiders it as a *Poa;* in his *Species Plantarum* and *Flora Suecica,* as an *Aira;* and, laſtly, in his *Syſtema Vegetabilium,* makes it a *Melica.*

If the Spiculæ be examined when the plant is young, they are certainly very Poa-like, being pointed, flattened, and containing uſually from three to five flowers; as they advance, their form alters, they become rounder, and more like the flowers of the *Aira aquatica:* if the *rudimentum floſculi* were wanting, it would be difficult to ſay with which of the two genera it ſhould be placed; that being preſent, the difficulty vaniſhes, and we claſs it at once with the *Melica.*

Two ſtriking peculiarities diſtinguiſh this graſs: the ſtalk has only one knot, and that near its baſe; and not only its ſtamina, but its ſtigmata alſo, are of a deep purple colour.

MERRET's name of *Gramen Spica Lavendulæ,* is very expreſſive of its appearance when in flower.

It is a very common graſs on wet moors and heaths, and flowers from July to the end of September; it is harſh and late, and therefore does not ſeem at all adapted to agricultural purpoſes; it varies greatly in ſize.

Mr. LIGHTFOOT, in his *Flora Scotica,* informs us, that in the Iſle of Skie, the fiſhermen make ropes for their nets of this graſs, which they find by experience will bear the water well without rotting. SCHEUCHZER ſays, that beſoms are ſometimes made of the ſtraws.

1.

Melica cærulea.

POA AQUATICA. WATER MEADOW GRASS.

POA *Lin. Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. 2-valvis, multiflorus. *Spicula* ovata: valvulis margine ſcarioſis acutiuſculis.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

POA *aquatica* panicula diffuſa, ſpiculis ſexfloris linearibus. *Lin. Syſt. Vegetab. p.* 97. *Sp. Pl. p.* 98. *Fl. Suec. n.* 26.

POA altiſſima, foliis latiſſimis, panicula ampliſſima, locuſtis diſtichis multifloris. *Haller hiſt. n.* 1454.

POA *aquatica. Scopoli Fl. Carn. n.* 105.

GRAMEN aquaticum paniculatum latifolium, *Bauh. Pin.* 3.

GRAMEN aquaticum majus. *Ger. emac.* 6. *Raii Syn. p.* 411. Great Water-Reed-Graſs. *Hudſon Fl. Angl. ed.* 2. *p.* 38.

RADIX perennis, repens.	ROOT perennial, and creeping.
CULMUS tripedalis, ad ſepedalem, erectus, folioſus, craſſitie culmi arundinacei, ſuperne ubi nudus, teres, lævis, ſubtiliſſime ſtriatus; geniculis flaveſcentibus.	STALK from three to ſix feet high, upright, leafy, the thickneſs of a reed ſtraw, on the upper part where it is naked, round, ſmooth, very finely grooved; the joints yellowiſh.
FOLIA ſemunciam aut unciam fere lata, utrinque glabra, tenuiſſime ſtriata, carinata, carina marginibuſque aſperis, ad baſin folii utrinque macula triangularis flava, *vagina* glabra, ſtriata, carina prominente, *membrana* brevis obtuſa.	LEAVES half an inch and almoſt an inch broad, ſmooth on both ſides, very finely grooved, keeled, the keel as well as the edges rough, the baſe of the leaf on each ſide is marked with a yellow triangular ſpot, the *ſheath* is ſmooth and ſtriated, the keel prominent, the *membrane* ſhort and obtuſe.
PANICULA maxima, ſemipedalis, aut pedalis, erecta, ramoſiſſima.	PANICLE very large, from ſix inches to a foot in length, upright, very much branched.
PEDUNCULI ſubtriquetri, ſcabri, ſuperne flexuoſi.	FLOWER-STALKS ſomewhat three-cornered, rough, crooked above.
SPICULÆ lanceolatæ, ſubcompreſſæ 6—8. floræ, colore ex ſpadiceo et viridi miſto.	SPICULÆ lanceolate, ſomewhat flattened, containing from ſix to eight flowers, variegated with green and purple.
CALYX: *Gluma* bivalvis, valvulæ membranaceæ, uninerviæ, ovatæ, concavæ, interiore breviore et acutiore.	CALYX: a *Glume* of two valves, the valves membranous, one-ribbed, ovate, concave, the innermoſt ſhorter and more pointed than the other.
COROLLA bivalvis, valvulæ ſubæquales, obtuſæ, exteriore majore, concava, nervoſa, ad baſin tuberculata, interiore planiuſcula.	COROLLA compoſed of two valves, which are nearly equal, obtuſe, the outer one largeſt, concave, ribbed, with a ſmall tubercle at the baſe, the inner one nearly flat.
STAMINA: FILAMENTA tria, alba, capillaria; ANTHERÆ oblongæ, utrinque bifidæ, flavæ aut purpureæ.	STAMINA: three, white, capillary FILAMENTS; ANTHERÆ oblong, bifid at each end, yellow or purple.
PISTILLUM: GERMEN ovatum, glabrum; STYLI duo, ſuperne ramoſi, inferne nudi, paulo infra apicem prodeuntes.	PISTILLUM: GERMEN, ovate, ſmooth; STYLES two, branched above, naked below, proceeding from a little below the top.
NECTARIUM: ſquamula parva truncata ad baſin germinis.	NECTARY: a ſmall truncated ſcale at the baſe of the germen.
SEMEN tectum, hinc convexum, ſtriatum, inde concavum, pallide fuſcum.	SEED covered, convex and ſtriated on one ſide, concave on the other, of a pale brown colour.

The *Poa aquatica* is one of the largeſt as well as the moſt uſeful of our graſſes; it conſtitutes a great part of the riches of Cambridgeſhire, Lincolnſhire, and other counties, where draining the land by means of windmills has taken place; immenſe tracts of territory that uſed to be overflown and produce uſeleſs aquatics, but which ſtill retain much moiſture, are, by the above proceſs, ſpontaneouſly covered with this graſs, which not only affords rich paſturage for their cattle in the ſummer, but forms the chief part of their winter fodder.

It has a powerfully creeping root, and bears frequent mowing well (we have known it cut thrice in one ſeaſon in the vicinity of the Thames); hence it is apt to gain the aſcendancy over, rather than be overcome by other plants.

It grows not only in very moiſt ground, but in the water itſelf: like the Cats-tails, Burr-reed, and ſeveral other plants of that kind, it ſoon fills up the watery ditches which ſurround the meadows in which it grows, and occaſions them to require frequent cleanſing; in this reſpect it is a formidable plant, even in ſlow rivers.

In the Iſle of Ely, they have a particular method of cleanſing the rivers, which are liable to be ſoon choked up by the Arrow-head, Water-lilies, Reeds, &c. by means of an inſtrument called a Bear, which is an iron roller, in which a number of pieces of iron, like ſmall ſpades, are fixed; this is drawn up and down the river by horſes, which travel on the banks, and tearing up every plant by the roots, they float and are carried away by the ſtream.

The Poa aquatica not only affords ſuſtenance to cattle, but is a favourite food of the Caterpillar of the Gold-ſpot Moth (*Phalæna Feſtucæ, Lin.*) which LINNÆUS deſcribes as feeding on the *Feſtuca fluitans*, but which feeds with us chiefly on this graſs: the Moth proceeding from this larva, is one of the moſt beautiful which this country produces; the Caterpillar being ſmooth and of a green colour, is not eaſily diſtinguiſhed from the graſs on which it feeds; when full-grown, it uſually bends down the top of one of the leaves, and underneath it, makes a thin ſpinning, in which it changes to chryſalis; this ſpinning, from its whiteneſs, is eaſily diſcovered; but we muſt apprize our readers, that theſe Caterpillars are not very numerous, and that they will be fortunate if they find one or two after a long ſearch; the Moth, Caterpillar, and Chryſalis, are figured in ALBIN's Engliſh Inſects; but a much better painting of the Moth may be ſeen in ROESEL, *Tom.* 1. *Tab.* 30. We have generally found them at the commencement of harveſt, when the wheat has been in ſheaf: the Moth comes forth in a week or two.

We obſerved in the Iſle of Ely, a much larger Caterpillar, when full-grown, nearly the ſize of the *Ph. Potatoria*, hairy and very beautiful, not uncommon on this graſs; but not having the proper convenience for breeding it, we are as yet unacquainted with the Moth it produces, but ſuſpect it will prove a non-deſcript.

The Poa aquatica flowers as late as Auguſt and September.

12.

Poa aquatica

[illegible]

SHERARDIA ARVENSIS. FIELD SHERARDIA.

SHERARDIA *Lin. Gen. Pl.* TETRANDRIA MONOGYNIA.

Cor. 1-petala, infundibuliformis. *Semina* 2, tridentata.

Raii Syn. Gen. 12. HERBÆ STELLATÆ.

SHERARDIA *arvenſis* foliis omnibus verticillatis, floribus terminalibus. *Lin. Syſt. Vegetab. p.* 125. *Spec. Pl. p.* 149. *Fl. Suec. n.* 120.

SHERARDIA foliis ſenis lanceolatis, floribus ſeſſilibus umbellatis. *Haller. Hiſt. n.* 734.

SCHERARDIA *arvenſis. Scopoli Fl. Carn. n.* 143.

RUBEOLA arvenſis repens cærulea. *Baub. Pin.* 334.

RUBIA minor pratenſis cærulea. *Parkins. p.* 276.

RUBEOLA parvo flore cæruleo ſe ſpargens. *I. B.* III. 719. *Raii Syn. p.* 225. Little field Madder. *Hudſon Fl. Angl. ed.* 2. *p.* 66. *Lightfoot Fl. Scot. p.* 114.

RADIX annua, fibroſiſſima, fibrillis rufis.	ROOT annual, extremely fibrous, the ſmall fibres reddiſh brown.
CAULES palmares, ſpithamæi et ultra, humifuſi, aſperi, tetragoni.	STALKS a hand's breadth, half a foot or more in length, laying on the ground, rough and four-cornered.
FOLIA ſuperiora verticillata, ſena, ſeu quina, foliolis lanceolatis, inferiora numero ſenſim decreſcunt, et latiora fiunt, infima ſæpius terna, ovata, ſemiverticillata, omnibus mucronatis, ſuperne ſcabris.	LEAVES: thoſe on the upper part of the ſtalk growing in whirls, five or ſix together, the leaves lanceolate, the lower leaves gradually decreaſing in number, and becoming broader, the lowermoſt generally growing three together, ovate, and forming half a whirl, all of them terminating in a ſhort point, and rough on the upper ſide.
FLORES umbellati, ſeſſiles, parvi, læte purpurei.	FLOWERS growing in umbels, ſeſſile, ſmall, of a bright purple colour.
PEDUNCULI axillares, ſolitarii, tetragoni, peracta floreſcentia longitudine foliolorum.	FLOWER-STALKS growing from the alæ of the leaves, ſolitary, four-cornered, when the flowering is over the length of the leaves.
CALYX INVOLUCRUM octophyllum, foliolis lanceolatis, carinatis, ciliatis.	CALYX: an INVOLUCRUM of eight leaves, which are lanceolate, keeled and edged with hairs.
CALYX PERIANTHIUM parvum, 6-dentatum, ſuperum, perſiſtens, *fig.* 1.	CALYX: a ſmall PERIANTHIUM, having ſix teeth, placed on the top of the germen and permanent, *fig.* 1.
COROLLA monopetala, infundibuliformis. *Tubus* cylindraceus, longus. *Limbus* quadripartitus, planus, laciniis acutis, *fig.* 2.	COROLLA monopetalous, funnel-ſhaped. *Tube* cylindrical and long. *Limb* flat, divided into four ſharp ſegments, *fig.* 2.
STAMINA: FILAMENTA quatuor ad apicem tubi poſita, demiſſo polline reflexa. ANTHERÆ ſimplices, pallide purpureæ, *fig.* 3.	STAMINA: four FILAMENTS placed at the top of the tube, turning back on the ſhedding of the pollen. ANTHERÆ ſimple, pale purple, *fig.* 3.
PISTILLUM: GERMEN didymum, oblongum, inferum, *fig.* 4. STYLUS filiformis, ſuperne bifidus. STIGMATA capitata, *fig.* 5.	PISTILLUM: GERMEN double, oblong, beneath the calyx, *fig.* 4. STYLE filiform, bifid at top. STIGMATA forming two ſmall heads, *fig.* 5.
PERICARPIUM nullum; fructus oblongus, coronatus, longitudinaliter in duo ſemina ſeparabilis.	SEED-VESSEL none; the fruit oblong, crowned, ſeparable longitudinally into two ſeeds.
SEMINA bina, oblonga, apice tribus acuminibus notata, hinc convexa inde plana, *fig.* 6, 7.	SEEDS two together, oblong, furniſhed at top with three points, convex on one ſide and flat on the other, *fig.* 6, 7.

TOURNEFORT conſidered this plant as a ſpecies of *Aparine*. The more accurate DILLENIUS made a new genus of it, to which he gave the name of his friend and patron, that excellent Engliſh Botaniſt Dr. SHERARD. *Vid. Dill. Nov. Pl. Gen. p.* 96.

This ſmall annual is a native of our corn fields, and common almoſt every where, flowering during the greateſt part of the ſummer.

There is a neatneſs in its bloſſoms almoſt ſufficient to recommend it as an ornamental plant: to any other uſe it does not appear to have the leaſt pretenſions.

3[illegible]

Sherardia arvensis

J. Sowerby del. et sculp.

Sagina apetala.

SAGINA APETALA. ANNUAL PEARL-WORT.

SAGINA *Lin. Gen. Pl.* Tetrandria Tetragynia.
Cal. 4-phyllus. *Petala* 4. *Capſ.* 1-locularis, 4-valvis, polyſperma.
Raii Syn. Gen. 24. Herbæ pentapetalæ vasculiferæ.
SAGINA *apetala* radice annua, caule erectiuſculo pubeſcente.
SAGINA *apetala* caule erectiuſculo pubeſcente, floribus alternis apetalis. *Lin. Mantiſſ.* 559. *Syſt. Vegetab.* p. 142.
SAGINA caulibus erectis, radice annua, floribus apetalis. *Ard Spec.* 2. p. 22. t. 8. fig. 1.
SAXIFRAGA Anglica Alſinefolia annua. *D. Plot Hiſt. Nat. Oxf.* c. 6. § 9. t. 9. f. 7. *Raii Syn.* p. 345. Annual Pearl wort.
ALSINE Saxifraga graminifolia, floſculis tetrapetalis herbidis et muſcoſis. *Pluk. Alm.* t. 74. f. 2.
SAGINA procumbens var. β. *Hudſon Fl. Angl.* ed. 2. p. 73.

RADIX annua, fibroſa.	ROOT annual and fibrous.
CAULES plures, primo procumbentes, demum erecti, unciales, triunciales et ultra, teretes, filiformes, hiſpiduli, nodoſi.	STALKS ſeveral, at firſt procumbent, afterwards upright, from one to three inches or more in height, round, filiform, ſomewhat hiſpid, and jointed.
FOLIA oppoſita, lineari-ſubulata, brevia, mucronata, hiſpidula.	LEAVES oppoſite, linear, and ſomewhat awl-ſhaped, ſhort, terminated by a fine point, and ſomewhat hiſpid.
FLORES alterni, pedunculati.	FLOWERS alternate, and ſtanding on foot-ſtalks.
PEDUNCULI apice primo nutantes, demum erecti, pilis raris veſtiti.	FLOWER-STALKS firſt drooping at top, finally upright, covered with a few hairs.
CALYX: Perianthium tetraphyllum ſubinde pentaphyllum, foliolis ovatis, obtuſis, concavis, lævibus, perſiſtentibus, marginibus purpuraſcentibus, *fig.* 1.	CALYX: a Perianthium of four, ſometimes five, ovate, obtuſe, hollow, ſmooth, permanent leaves, with purpliſh edges, *fig.* 1.
COROLLA: Petala plerumque quatuor, minutiſſima, nudo oculo vix conſpicua, alba, obcordata, *fig.* 2.	COROLLA: generally compoſed of four Petals, which are extremely ſmall, and ſcarcely viſible to the naked eye, white and inverſely heart-ſhaped, *fig.* 2.
STAMINA: Filamenta quatuor alba, calyce breviora. Antheræ albæ, *fig.* 3.	STAMINA: four white Filaments, ſhorter than the calyx. Antheræ white, *fig.* 3.
PISTILLUM et Capſula ut in Sagina procumbente.	PISTILLUM and Capſule as in the procumbent Pearl-wort.

Mr. Ray, in his Synopſis, conſiders this ſpecies as diſtinct from the *procumbens*; and informs us, that it differs from it not only in the colour of its ſtalks and leaves, which are of a browner hue, but that it has an annual root; and that it does not put forth roots at the joints as the *procumbens* does, he refers to a figure given of it by Plot in his Natural Hiſtory of Oxfordſhire.

Notwithſtanding Ray's deſcription, and Plot's figure, Linnæus, in his *Spec. Plant.* conſidered it only as a variety of the *procumbens*; but afterwards, more fully convinced by the deſcription and figure given of this plant by Arduini, an *Italian* Botaniſt, he adopts it in his ſecond *Mantiſſa* as a ſpecies. It appears, by Mr. Hudson's quotations, that he has been no ſtranger to the obſervations of theſe authors; but, in oppoſition to them all, he continues it only as a variety.

From a thorough conviction of the propriety of Mr. Ray's conduct in making it a ſpecies, we have given a ſeparate figure of it, and ſhall not only confirm his account, but give a few additional remarks of our own, which we preſume may finally ſettle this matter.

The diſtinction of an annual and perennial root, though it cannot be admitted, perhaps, in all caſes as a ſpecific character, muſt be allowed to have conſiderable weight. To aſcertain the conſtancy of this character we have for ſeveral years cultivated the two plants cloſe together, on a wall with partitions containing earth; the reſult has been that the *apetala* has proved as regular an annual as the *Draba verna*, while the *procumbens* has continued green through the winter; and we have no doubt but this always is the caſe with theſe plants, when they grow in their natural ſituations.

The *procumbens* is always procumbent; and when it grows, as it moſt commonly does, in moiſt ſituations, it mats and ſpreads on the ground. The ſtalks of the *apetala*, when the plant is young, ſpread on the ground; but as it advances to maturity they riſe up, and, if ſeveral grow together, become quite erect. Where the plants grow ſingly, and in a dry ſituation, they neither acquire the ſame height, nor the ſame degree of uprightneſs. Sometimes this ſpecies is found on moiſt ſhady walls, much taller and more branched than the ſpecimens we have figured; but whether the plants of the *apetala* be ſmall or large, their ſtalks and leaves are always hairy; while in the *procumbens* they are perfectly ſmooth, the hairs are viſible to the naked eye, and when magnified have no little globules at their extremities, as thoſe of the *Spergula ſaginoides* have, which comes very near in its appearance to the Pearl-wort: thus we find theſe three difficult plants may, with certainty, be diſtinguiſhed by their ſtalks alone.

The *apetala* is a ſmaller plant than the *procumbens*, and much finer in its ſtalks. Its leaves are alſo ſhorter by almoſt one-half, and leſs ſucculent; and theſe, ſo far we have obſerved, are the chief differences.

From its name one would be led to ſuppoſe, that it was perfectly apetalous; and both Linnæus and Arduini deſcribe it as ſuch. We have generally found it with petals; but ſo minute, indeed, as almoſt to require a magnifier to render them viſible. Theſe petals we have given a magnified view of, and have repreſented the plant in the ſeveral ſtates in which it is found in dry ſituations.

Mr. Ray does not appear to have had an idea of its being a common plant, as he mentions the particular ſpots where it was to be found: with us there is no plant more abundant, eſpecially on walls, in gravel walks, where it is a troubleſome weed, and on barren heaths.

It flowers in *May* and *June*. There is, perhaps, ſcarce any plant that is quicker in ripening its ſeeds.

In our examination of this plant we found the egg of a very ſmall moth glued to an unripe capſule, the ſeeds of which were probably deſtined to feed its caterpillar.

Potamogeton crispum. Curled Pondweed, or greater Water Caltrops.

POTAMOGETON *Lin. Gen. Pl.* Tetrandria Tetragynia.

Cal. 0. *Petala* 4. *Stylus* 0. *Sem.* 4.

Raii Syn. Gen. 5. Herbæ flore imperfecto seu stamineo vel apetalo potius.

POTAMOGETON *criſpum* foliis lanceolatis alternis oppoſitiſve undulatis ſerratis. *Lin. Syſt. Vegetab.* p. 141. *Sp. Pl.* p. 183. *Fl. Suec.* n. 148.

POTAMOGETON. *Hall. Hiſt.* n. 848.

POTAMOGETON *criſpum. Scopoli Fl. Carn.* n. 181.

POTAMOGETON foliis criſpis ſeu lactuca ranarum, *Bauh.* p. 465.

POTAMOGETON ſeu fontinalis criſpa. *I. B.* III. p. 778.

TRIBULUS aquaticus minor Quercûs floribus. *Ger. em.* 1282.

TRIBULUS aquaticus minor prior. *Park.* 1248. *Raii Syn.* p. 149. The greater Water Caltrops. *Hudſon Fl. Angl.* p. 75. *Lightfoot Fl. Scot.* p. 122..

RADIX perennis, repens.	ROOT perennial and creeping.
CAULES plurimi, variæ longitudinis, ſordide carnei, ſubdiaphani, compreſſi, utrinque ſulcati, ramoſi.	STALKS numerous, of various lengths, of a dirty fleſh-colour, ſomewhat tranſparent, flattened, with a groove on each ſide, and branched.
VAGINÆ breves, concolores, vix diſtinguendæ.	SHEATHS ſhort, of the ſame colour as the ſtalks, ſcarcely to be diſtinguiſhed.
FOLIA ſeſſilia, lanceolata, obtuſa, ſubdiaphana, criſpa, ſcarioſa, nitida, trinervia, ſerrulata, inferioribus alternis, ſuperioribus oppoſitis.	LEAVES ſeſſile, lanceolate, obtuſe, ſomewhat tranſparent, curled, ſonorous to the touch, ſhining, three-ribbed, ſharply and finely ſerrated, the lower ones alternate, the upper ones oppoſite.
PEDUNCULI axillares, bi ſeu triunciales, craſſiuſculi, ſubcompreſſi.	GENERAL FLOWER-STALKS growing from the alæ of the leaves, two or three inches in length, thickiſh, and ſomewhat flattened.
FLORES ſpicati, ſex ſive octo, ſeſſiles.	FLOWERS ſix or eight, growing in a ſpike, and ſeſſile.
CALYX nullus.	CALYX wanting.
COROLLA: Petala quatuor, ſubrotunda, obtuſa, concava, unguiculata, primo erecta, dein patentia, decidua, e fuſco viridia, *fig.* 1.	COROLLA: four Petals, roundiſh, obtuſe, hollow, connected by a little claw, at firſt upright, afterwards ſpreading and deciduous, of a greeniſh brown colour, *fig.* 1.
STAMINA: Filamenta quatuor, breviſſima, vix diſtinguenda. Antheræ breves, didymæ, albæ, *fig.* 2.	STAMINA: four Filaments, very ſhort, ſcarcely to be diſtinguiſhed. Antheræ ſhort, having two ſeparate lobes, of a white colour, *fig.* 2.
PISTILLUM: Germina quatuor, ovato-acuminata. Stylus nullus. Stigmata obtuſa, *fig.* 3.	PISTILLUM: Germina four, ovate, with a long point. Style none. Stigmata obtuſe, *fig.* 3.
SEMINA quatuor, nuda, majuſcula, ſordide virentia, utrinque compreſſa, externe ad baſin denticulata, *fig.* 4.	SEEDS four, naked, rather large, of a dirty green, flattened on each ſide, toothed externally at the baſe, *fig.* 4.

Moſt of the plants of this *genus* have creeping roots, which penetrating eaſily through the mud, cauſe them to ſpread very faſt, ſo as ſoon to fill up a pond or ſlow river, if unmoleſted.

We have obſerved, that ducks very readily eat not only the ſeeds, but the leaves of the preſent ſpecies, which is one of the moſt common. The introduction of water-fowl may therefore probably prevent this ſpecies at leaſt, and perhaps ſome of the others, from increaſing too much.

It flowers in *June* and *July*.

Potamogeton crispum.

Atropa Belladonna

ATROPA BELLADONNA. DWALE, or DEADLY NIGHTSHADE.

ATROPA *Lin. Gen. Pl.* PENTANDRIA MONOGYNIA.

Cor. campanulata. *Stam.* diſtantia. *Bacca* globoſa, 2-locularis.

Raii Syn. Gen. 16. *Herbæ Bacciferæ.*

ATROPA *Belladonna* caule herbaceo, foliis ovatis integris. *Lin. Syſt. Vegetab. ed.* 14. *p.* 221. *Sp. Plant. p.* 260.

BELLADONNA caule herbaceo, brachiato, foliis ovato lanceolatis, integerrimis. *Haller. hiſt. n.* 579.

BELLADONNA *trichotoma. Scopoli Fl. Carn. n.* 255.

SOLANUM melanoceraſus. *Bauh. pin.* 166.

SOLANUM lethale. *Ger. emac.* 340. *Parkinſ.* 346. *Raii Syn. p.* 265. Deadly Nightſhade, Dwale. *Hudſon Fl. Angl. p.* 93. *Lightfoot Fl. Scot. p.* 144. *Jacquin Fl. Auſtr. t.* 309.

RADIX perennis, craſſa, albida, ramoſa, repens.	ROOT perennial, thick, whitiſh, branched, and creeping.
CAULES plures, baſi digitum craſſi, tripedales et ultra, erecti, herbacei, teretes, ramoſi, in apricis ſordide purpurei, pubeſcentes.	STALKS ſeveral, at bottom the thickneſs of one's finger, three feet or more high, upright, herbaceous, round, branched, in expoſed ſituations of a dingy purple colour, downy.
FOLIA petiolata, ovata, acuta, integerrima, utrinque lævia, venoſa, ad latera caulis ramorumque gemina et magnitudine inæqualia, inter quæ pedunculus uniflorus et ſæpius ſolitarius egreditur.	LEAVES ſtanding on footſtalks, ovate, pointed, perfectly entire, ſmooth on both ſides, veiny, growing in pairs (but unequal in ſize) from the ſides of the ſtalks, from betwixt them riſes the flower-ſtalk ſupporting one flower, and uſually ſingle.
PEDUNCULI teretes, viſcidi, ad flores paululum incraſſati.	FLOWER-STALKS round, viſcid, thickened ſomewhat next the flowers.
FLORES cernui, inodori, ſordide purpurei, ſubviſcidi, externe nitidi, venoſi.	FLOWERS drooping, ſcentleſs, of a dingy purple colour, ſomewhat viſcid, externally gloſſy and veiny.
CALYX: PERIANTHIUM monophyllum, quinquepartitum, angulatum, laciniis ovato-acuminatis, inæqualibus, viſcoſis, *fig.* 1.	CALYX: a PERIANTHIUM of one leaf, deeply divided into five ſegments, angular, the ſegments ovato-acuminate, unequal, and viſcous, *fig.* 1.
COROLLA monopetala, campanulata; *Tubus* breviſſimus, albus, ſubpentagonus; *Limbus* ventricoſus, ovatus, ore quinquefido, patulo, laciniis ſubæqualibus, *fig.* 2.	COROLLA monopetalous, bell-ſhaped; *Tube* very ſhort, white, ſlightly five-cornered; *Limb* bellying out, ovate, mouth ſpreading, divided into five equal ſegments, *fig.* 2.
STAMINA: FILAMENTA quinque, albida, quorum duo paulo breviora, inferne paulo craſſiora, piloſa, apice incurva, longitudine tubi; ANTHERÆ magnæ, didymæ, luteſcentes, remotæ, *fig.* 3.	STAMINA: five FILAMENTS, whitiſh, two of which are a little ſhorter than the reſt, ſomewhat thickeſt towards the baſe, and hairy, bent down at top, the length of the tube; ANTHERÆ large, double, yellowiſh, and remote, *fig.* 3.
PISTILLUM: GERMEN ſemiovatum, utrinque ſulcatum, ad baſin glandula luteſcente cinctum; STYLUS filiformis, ſtaminibus longior, inclinatus; STIGMA capitatum, aſſurgens, tranſverſo-oblongum, bilabiatum, viride, *fig.* 4.	PISTILLUM: GERMEN ſemiovate, with a groove on each ſide, ſurrounded at bottom with a yellowiſh gland; STYLE thread-ſhaped, longer than the ſtamina, inclined downwards; STIGMA forming a little head, tranſverſely oblong, two-lip'd, of a green colour, *fig.* 4.
PERICARPIUM: BACCA atra, nitida, ſubrotunda, ſaporis dulcis, bilocularis, *fig.* 5, 6.	SEED-VESSEL: a black, gloſſy, roundiſh BERRY, of a ſweet taſte, with two cavities, *fig.* 5, 6.
SEMINA plurima, fuſca, irregularia, *fig.* 7.	SEEDS numerous, brown, and irregular in ſhape, *fig.* 7.
Obſ. Semina fuſceſcunt priuſquam Bacca nigreſcit.	*Obſ.* The ſeeds turn brown before the Berry becomes black.

The rage for building, joined to the numerous alterations perpetually making in the environs of London, have been the means of extirpating many plants which formerly grew plentifully around us. To this cauſe we are to attribute the loſs of the preſent plant, which the late Sir WILLIAM WATSON and Mr. STANESBY ALCHORNE of the Tower, gentlemen eminent for their knowledge of Britiſh plants, have often aſſured me grew, within their remembrance, in ſeveral places near town; happily we are now under the neceſſity of going much further into the country, if we wiſh to ſee it grow wild. We have frequently noticed it in many of the chalk-pits in Kent, and in both ſhady and expoſed ſituations elſewhere; in particular, we remember to have ſeen it growing in great abundance on Keep-Hill, near High Wycomb, Buckinghamſhire. Cloſe by the ſpot where we obſerved it, there chanced to be a little boy; I aſked him, if he knew the plant? He anſwered "Yes; it was *naughty man's cherries.*" I then inquired of him, if he had ever eaten any of the berries? He ſaid he had, with ſeveral other children from an adjoining poor-houſe, and that it made them all very ſick, but that none of them had died.

Was not this plant ſtudiouſly deſtroyed wherever it is found wild, it would be much more common than it is; for there are few plants to which nature has been ſo liberal in the means of increaſe: it has a very large perennial root, which runs deep into the earth, multiplies greatly, and frequently creeps under ground to a great diſtance; added to this, its berries are very numerous, and contain a prodigious quantity of ſeeds.

Forbidding

Forbidding as this plant may appear to ſome, its large gloſſy berries are certainly a great temptation to children; and, therefore, gentlemen, if they have the plant in their gardens, ſhould never ſuffer it to ripen its fruit.

It flowers in June and July; its berries are ripe in Auguſt and September.

Numerous inſtances of the pernicious, and even deleterious effects of the deadly Nightſhade are on record; among others, ſuch of our readers as are fond of hiſtory will not be diſpleaſed with the prolixity of the following account taken from *Blair's Pharmaco-Botanologia, p.* 81.

" The *Solanum Lethale* ſeems to produce the ſame effects with the *Hyoſcyamus, Cynogloſſum,* and other intenſe Narcoticks, which uſually, before they affect the perſon with ſleep, produce *delirious* and *manaical* ſymptoms; however it is an *herb* of ſo pernicious a nature, that ſcarce any Author who treats of it fails, from proper obſervation, or good information, to give diſmal inſtances of its bad effects. *Simon Pauli* refers us to *Lobelius* his *Adverſaria,* and *Bodeus à Stapel.* Mr. *Ray*'s account of what happened to a Mendicant Friar, upon the taking a glaſs of the infuſion of it in *mallow wine,* gives a good account of the various ſymptoms it produces. In a ſhort time, he became *delirious,* after a little (Cachinne) a grinning laughter like the *Riſus Sardonicus* ſucceeded; after that ſeveral irregular motions; and at laſt a real *madneſs,* and ſuch a ſtupidity as thoſe that are ſottiſhly drunk have: which after all was cured by a draught of vinegar. Mr. *Miller* mentions ſeveral Children at *Croydon,* who not long ſince were poiſoned. Another inſtance of its bad effects has fallen under my own obſervation: two or three perſons not far from hence, having got into a gentleman's garden, were delighted with the black berries of the *Solanum Lethale,* and eat ſome of them; it was very pleaſant (within a ſhort time after) to ſee their frantic humours, geſtures, and ſpeeches: but upon their taking of emeticks in due time, they were cured. It is worthy of recital what Mr. *Ray* tells us happened to a *Lady* of *Quality* of his acquaintance, who having a ſmall ulcer a little below her eye, which ſhe ſuſpected to be cancrous; ſhe applied a bit of the leaf of this Solanum, which ſo relaxed the *Tunica Uvea* in one night, that ſhe could not contract the *Pupilla* the next day; ſo that the *Pupilla* of the one *eye* was four times as big as the other; and upon the removal of the leaf, the fibres recovered their *muſcular* tone by degrees: and, leſt this ſhould ſeem to be merely accidental, ſhe repeated the experiment three times, at which Mr. *Ray* himſelf was preſent.

" But the moſt memorable inſtance of the direful effects of this *Plant* is to be ſeen recorded by the celebrated *Buchanan,* in his Hiſtory of Scotland, by which we may obſerve how the Almighty God can convert the moſt deadly poiſons into the fitteſt antidotes, for thoſe whom he has a mind to preſerve. This obliges me to make a digreſſion, not altogether unſuitable, ſince it gives the *botanical* deſcription of a *Plant,* writ about a hundred and fifty years ago, by one who himſelf was no profeſſed *Botaniſt,* the uſe made of it, and the wonderful effects it produced.

" In the reign of *Duncan* I. *King of Scotland* (who was afterwards murdered by *Mackbeth* the *Tyrant)* *Harold* the *Dane* invaded *England,* not long before the days of *King William* the *Conqueror: Sweno,* his brother, at the ſame time invaded *Scotland.* Upon his landing in *Fiſe,* he obtained a ſignal victory, which obliged the *King* of *Scotland,* with the remainder of his routed forces, to retire to *Bertha* (an ancient town of great note ſituated on the river *Tay,* which was not long after deſtroyed by an inundation, and out of whoſe ruins the town of *Perth* was built, and now ſtands upon the ſame river, two miles nearer the ſea) and purſued them ſo cloſely, that he laid ſiege to the town both by land and water. The *Scots* were put to great ſtraits, not for want of proviſions, but for want of *men* to repel the beſiegers. *King Duncan* was a peaceable unactive man; he had ſometime before committed the government to the management of Bancho, of a cunning and ſubtle wit; and to Mackbeth, of a fierce, bold, aſpiring ſpirit. Mackbeth went to the country to raiſe a reinforcement, while Bancho treated with the enemy, and firſt obtained a ceſſation of arms, and then ſpun out time by framing of articles of peace. The *Danes* wanted proviſions, but abounded with men; the *Scots* abounded in proviſions, but wanted men. The truce was equally acceptable to both, eſpecially to the *Danes,* who for the preſent expected plenty of all things, and for the future the conqueſt of a whole kingdom. Care was immediately taken by the *Scots* to afford them all manner of liquors, both wine and ale, and they continued to mix with them a good quantity of the Deadly Nightſhade (this *Solanum Lethale,* or *Somniferum)* of which we now treat. The bait took; the *Danes* drank plentifully, and were all intoxicated: mad with this poiſonous juice, and aſleep through drunkenneſs, the *Scots* fell upon them, killed the moſt part, and, with much ado, a few remaining got to their veſſels, while their beſotted *King* was carried, like a ſack-load, upon a beaſt down to the river, where there were ſcarce ſailors enough ſaved from the ſlaughter to man the veſſels."

DEERING relates, that a friend of his, a Dr. Medley, has ſeveral times eaten three or four of the berries, without receiving any hurt: and HALLER mentions his having ſeen a medical ſtudent ſwallow ſeveral. It is probable that theſe berries will not kill, unleſs many are eaten, but perhaps this poiſon, like many others, may act differently on different conſtitutions.

Vinegar has been recommended as an antidote to its poiſon; but powerful evacuations, particularly vomiting, are moſt to be depended on. In caſes where a poiſon of this kind is known to have been ſwallowed, the medical practitioner will be juſtified in a bold practice, for his patient is not only in a very dangerous ſituation, but the effect of emeticks has been known to be leſſened by the poiſon, ſo that fourteen grains of Emetick Tartar have been ſcarcely ſufficient to excite vomiting.

Many ſubſtances, which in large quantities, or injudiciouſly admininiſtered, have proved poiſonous, in ſmall doſes, ſkilfully exhibited, have been found extremely efficacious in the cure of diſeaſes, and hence this, as well as other plants have been tried, particularly in ſuch diſorders as have no impreſſion made on them by common remedies; but after numerous trials, there appears but little hopes of ſucceſs from the *Atropa Belladonna.*

Such as wiſh to know the particular diſeaſes againſt which the Deadly and the Garden Nightſhades have been directed, with the various ſymptoms they have produced on being taken, may conſult GATAKER's *Obſervations on the Internal Uſe of the Nightſhade, with the Supplement; and* BROMFIELD's *Account of the Engliſh Nightſhades, and their Effects,* 1757.

We have ſeen a goat eat, without injury, the leaves and ſtalks; and the caterpillar of the *Phalæna Antiqua, Roeſel t.* 39, and *Braſſicæ Roeſel t.* 29, feed on its foliage.

LYCOPSIS ARVENSIS. FIELD, or SMALL WILD BUGLOSS.

LYCOPSIS *Lin. Gen. Pl.* PENTANDRIA MONOGYNIA.
Corolla tubo incurvato.

Raii Syn. Gen. 13. HERBÆ ASPERIFOLIÆ.

LYCOPSIS *arvenſis* foliis lanceolatis hiſpidis, calycibus floreſcentibus erectis. *Lin. Syſt. Vegetab. p.* 160. *Sp. Pl. p.* 199. *Fl. Suec. n.* 167. *Fl. Lappon* 77.

LYCOPSIS foliis aſperrimis, undulatis, ſerratis, linguiformibus. *Hall. hiſt.* 605.

ECHIUM Fuchſii ſeu Borrago ſylveſtris. *I. B.* III. 581.

BUGLOSSUM ſylveſtre minus. *Bauh. pin.* 256. *Parkinſ.* 765. *Dillen. Nov. Gen. Tab.* 3.

BUGLOSSA ſylveſtris minor. *Ger. emac.* 799. *Raii Syn. p.* 227. *Hudſon. Fl. Angl. p.* 82. *Lightfoot Fl. Scot. p.* 135.

RADIX annua, ſimplex, fibroſa, albida.	ROOT annual, ſimple, fibrous, and whitiſh.
CAULIS pedalis, et ultra, erectus, ſubanguloſus, hiſpidus, plerumque ſuperne tantum ramoſus.	STALK a foot or more in height, upright, ſlightly angular, hiſpid, for the moſt part branched at top only.
FOLIA alterna, ſeſſilia, lanceolata, obtuſiuſcula, papilloſo-hiſpida, ſubtus pallidiora, avenia, margine undulata, ſubrevoluta.	LEAVES alternate, ſeſſile, lanceolate, bluntiſh, hiſpid, hairs iſſuing from ſmall papillæ, paleſt on the under ſide, veinleſs, waved at the edge, and ſlightly rolled back.
FLORES cærulei, ſpicati, ſecundi, ſeſſiles, deorſum ſpectantes.	FLOWERS blue, growing in ſpikes, all one way, ſeſſile, and turned backward.
BRACTEÆ foliis ſubſimiles.	FLORAL-LEAVES ſomewhat like the leaves themſelves.
CALYX: PERIANTHIUM, quinquepartitum, hiſpidum, perſiſtens, laciniis oblongis, acutis, longitudine fere corollæ.	CALYX: a PERIANTHIUM deeply divided into five ſegments, hiſpid, and permanent; the ſegments oblong, pointed, and almoſt the length of the corolla.
COROLLA monopetala, infundibuliformis; *tubus* cylindraceus, curvato-flexus, *fig.* 2. *limbus* ſemiquinquefidus, obtuſus; *faux* clauſa ſquamulis quinque, piloſis, albis, *fig.* 3.	COROLLA monopetalous, funnel-ſhaped; *tube* cylindrical, crooked, *fig.* 2. *limb* ſlightly divided into five ſegments, obtuſe; *mouth* cloſed by five, ſmall, white, hairy ſcales, *fig* 3.
STAMINA: FILAMENTA quinque, minima, ad flexuram tubi corollæ; ANTHERÆ parvæ, fuſcæ, *fig.* 4.	STAMINA: five FILAMENTS, very minute, at the curvature of the tube of the corolla; ANTHERÆ ſmall and brown, *fig.* 4.
PISTILLUM: GERMINA quatuor, viridia, glabra; STYLUS filiformis, longitudine ſtaminum; STIGMA obtuſum, ſubbifidum, *fig.* 5.	PISTILLUM: GERMINA four, green and ſmooth; STYLE filiform, the length of the ſtamina; STIGMA obtuſe and ſlightly bifid, *fig.* 5.
PERICARPIUM nullum, *Calyx* ſinu ſemina fovens, maximus, laciniis conniventibus donec ſemina nigreſcant deinde patentibus.	SEED-VESSEL none, the *Calyx* which contains the ſeed in its boſom, is very large, cloſing together till the ſeeds grow black, and then ſpreading.
SEMINA quatuor, majuſcula, nigricantia, reticulato-rugoſa, acutiuſcula; *fig.* 6.	SEEDS four, largiſh, nearly black, with a reticulated or wrinkly ſurface, and a little pointed, *fig.* 6.
RECEPTACULUM punctis quatuor fuſcis excavatis notatum.	RECEPTACLE marked with four round dots, hollowed out.

The *Lycopſis Arvenſis* is a very common plant in the corn fields, eſpecially ſuch as are ſandy, and on dry banks, in the neighbourhood of London. We have ſometimes ſeen it ſo plentiful as to be highly injurious to the huſbandman: it may be found in bloſſom from May to July.

The following account of the medicinal virtues of this plant appeared lately in moſt of our newſpapers: without vouching for the truth of the report, we have thought it our duty to lay it before our readers, with a ſincere wiſh that the herb may prove as efficacious in its application, as is here repreſented.

“ The celebrated M. JEAN FONTANA, Member of the learned academy of Turin, has lately publiſhed, for “ the general good of ſuffering mankind, a ſpecific remedy againſt the ANTHRAX, or corroſive ulcer, otherwiſe “ called Carbuncle, or Plague-Sore. The curative preſcription was communicated to him by the perſon who “ has adminiſtered it for many years to patients of that deſcription, and with conſtant ſucceſs. It conſiſts “ ſimply in the uſe of a field-plant, called by Linnæus, LYCOPSIS ARVENSIS. Bruiſe and pound the plant; “ lay it on the tumour; fix it there by means of a bandage, and do not touch it before it hath remained twenty-“ four hours. During the firſt ſix or ſeven hours, the patient will feel a painful and burning heat in the part. “ It often happens that on taking off the firſt apparel, the ſlough gets looſe and diſcovers a wound, which heals “ in a few days, by applying to it a plaſter of the unguent called *Baſilicon*. If the caſe ſhould be otherwiſe, “ the firſt method of cure muſt be repeated. This ſecond application of the bruiſed plant, which will not “ occaſion above two hours pain to the patient, will be fully ſufficient to remove the ſlough, and then the uſe “ of the above plaſter effects a ſpeedy and radical cure.”

Lycopsis arvensis

Lysimachia Nemorum

LYSIMACHIA NEMORUM. WOOD MONEYWORT, or LOOSESTRIFE.

LYSIMACHIA *Linnæi Gen. Pl.* PENTANDRIA MONOGYNIA.

Cor. rotata. *Capſ.* globoſa, mucronata, 10-valvis.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

LYSIMACHIA *nemorum* foliis ovatis acutis, floribus ſolitariis, caule procumbente. *Lin. Syſt. Vegetab. p.* 165. *Sp. Pl. p.* 211.

LYSIMACHIA caule decumbente, foliis ovato-lanceolatis, petiolis alaribus unifloris. *Haller hiſt. p.* 278.

ANAGALLIS lutea nemorum. *Bauhin Pin. p.* 252.

ANAGALLIS lutea. *Gerard emac.* 618.

ANAGALLIS flore luteo. *Parkinſ.* 558.

ANAGALLIS lutea nummulariæ ſimilis. *J. Bauh.* III. 370. *Raii Syn. p.* 282. Yellow Pimpernel of the Woods. *Hudſon Fl. Ang. p.* 86. *Lightfoot Fl. Scot. p.* 138.

RADIX perennis, fibroſa, fibris albidis.	ROOT perennial, fibrous, the fibres whitiſh.
CAULES plures, decumbentes, teretiuſculi, utrinque ſulcati, idque alterne, læves, rubentes, ex ima parte radicantes.	STALKS ſeveral, decumbent, roundiſh, with a furrow on each ſide, and that alternately, ſmooth, of a red colour, ſtriking root at the baſe.
FOLIA oppoſita, petiolata, ovata, acuta, utrinque glabra, ſubundulata, e flavo-viridia, venis prominulis; petiolis brevibus, latiuſculis.	LEAVES oppoſite, ſtanding on foot-ſtalks, ovate, pointed, gloſſy on each ſide, ſomewhat waved, of a yellowiſh-green colour, the veins a little prominent; leaf-ſtalks ſhort and broadiſh.
PEDUNCULI axillares, bini ſive ſolitarii, teretes, uniflori, tenues, quam folia longiores.	FLOWER-STALKS axillary, growing ſometimes in pairs, ſometimes ſingly, round, one-flower'd, ſlender, and longer than the leaves.
CALYX: PERIANTHIUM quinquepartitum, perſiſtens, laciniis ſubulatis, ſubtriangularibus, *fig.* 1.	CALYX: a PERIANTHIUM deeply divided into five ſegments, and permanent, the ſegments awl-ſhaped, and ſomewhat triangular, *fig.* 1.
COROLLA monopetala, flava, *tubus* nullus; limbus quinquepartitus, laciniis ovatis, *fig.* 2. 3. baſi ſaturatius flavis, nitidiſque, in fauce corollæ glandulæ flavæ inter filamenta locantur, et margo corollæ glandulis pedicellatis ornatur, *fig.* 6.	COROLLA monopetalous, yellow, *tube* wanting, the limb divided into five ovate ſegments, *fig.* 2. 3. at bottom more intenſely yellow and ſhining, in the mouth of the corolla ſmall yellow glands are obſervable betwixt the filaments, and the edge of the corolla is ornamented with little glands ſtanding on foot-ſtalks, *fig.* 6.
STAMINA: FILAMENTA quinque, lævia erecta, medio paulo craſſiora; ANTHERÆ oblongæ, incurvatæ, *fig.* 4. 5.	STAMINA: five FILAMENTS, ſmooth, upright, ſomewhat thickeſt in the middle; ANTHERÆ oblong, bent a little downwards, *fig.* 4. 5.
PISTILLUM: GERMEN ſubrotundum, læve; STYLUS filiformis, apice paulo craſſior; STIGMA ſimplex, *fig.* 7.	PISTILLUM: GERMEN roundiſh, ſmooth; STYLE filiform, ſomewhat thickeſt at top; STIGMA ſimple, *fig.* 7.
PERICARPIUM: CAPSULA globoſa, unilocularis, *fig.* 8.	SEED-VESSEL: a globular CAPSULE of one cavity, *fig.* 8.
SEMINA plurima, orbiculata, plana, *fig.* 9.	SEEDS numerous, round, and flat, *fig.* 9.

When the bloſſoms of this plant are expanded, they ſomewhat reſemble thoſe of the common Pimpernel in ſhape, and hence the older Botaniſts, who paid little regard to ſuch minute but neceſſary diſtinctions, as the hairineſs of the Filaments, &c. conſidered it as an *Anagallis*; LINNÆUS has joined it with the Moneywort, to which, in its general habit, it bears no ſmall affinity, but from which it eſſentially differs in many particulars; the leaves, for inſtance, are more pointed, the flowers are ſmaller, leſs bell-ſhaped, and ſtand on much longer foot-ſtalks, and the ſtalks are generally redder.

This ſpecies grows in moiſt woods, and is not uncommon in the neighbourhood of London; in Charlton-Wood it particularly abounds, flowering from June to September.

Lysimachia vulgaris.

LYSIMACHIA VULGARIS. YELLOW LOOSE-STRIFE.

LYSIMACHIA *Lin. Gen. Pl.* PENTANDRIA MONOGYNIA.

Cor. rotata. *Capſ.* globoſa, mucronata, decemvalvis.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

LYSIMACHIA *vulgaris* paniculata, racemis terminalibus. *Lin. Syſt. Vegetab.* p. 165. *Sp. Pl.* p. 209. *Fl. Suecic.* n. 175.

LYSIMACHIA foliis ovato-lanceolatis, ſpicis paniculatis. *Hall. Hiſt.* 630.

LYSIMACHIA *vulgaris. Scopoli Fl. Carn.* n. 214.

LYSIMACHIA lutea. *I. B.* II. 901. *Ger. emac.* 474.

LYSIMACHIA lutea major quæ Dioſcoridis. *Bauh. Pin.* 245.

LYSIMACHIA lutea major vulgaris. *Park.* 544. Yellow Willow-herb or Looſe ſtriſe. *Raii Syn.* 282. *Hudſon Fl. Angl.* ed. 2. p. 86. *Lightfoot Fl. Scot.* p. 138.

RADIX perennis, repens.	ROOT perennial and creeping.
CAULIS tripedalis et ultra, erectus, ubi folia bina obtuſe tetragonus, ubi terna ſulcatus, ſeu anguloſus, angulis obtuſis; ſuperne hirſutulus, inferne glaber, ramoſus, ad genicula paululum incraſſatus.	STALK three feet or more in height, when the leaves grow in pairs, obtuſely four-cornered; when three together, grooved or angular, angles obtuſe, the upper part of the ſtalk ſlightly hairy, the lower ſmooth, branched, and a little thickened at the joints.
FOLIA bina, ſeu terna, quaterna et quina etiam obſervavi, ſeſſilia, ovato-lanceolata, integra, margine inæquali, venoſa, nuda.	LEAVES growing in pairs, or three together, I have even noticed them growing four or five together, ſeſſile, ovate and pointed, entire but not perfectly even on the edges, veiny and deſtitute of hairs.
FLORES paniculati, lutei, racemis terminalibus ex alis foliorum.	FLOWERS yellow, forming a panicle, flower-branches terminal, growing from the alæ of the leaves.
PEDUNCULI uniflori, ſubviſcidi, apice incraſſati.	FLOWER-STALKS ſingle-flowered, ſomewhat viſcid, and thickened at the extremity.
CALYX: PERIANTHIUM monophyllum, quinquepartitum, acutum, erectum, perſiſtens, laciniis ſtriatis, rubro marginatis, apicibus ante et poſt floreſcentiam tortuoſis. *fig.* 1.	CALYX: a PERIANTHIUM of one leaf, deeply divided into five ſegments, pointed, upright, and permanent, the ſegments ſtriated, and edged with red, the tips both before and after flowering twiſted. *fig.* 1.
COROLLA monopetala, rotata. *Limbus* quinquepartitus, laciniis ovatis, acutis. *fig.* 2.	COROLLA monopetalous, wheel-ſhaped. *Limb* deeply divided into five ſegments, which are ovate and pointed. *fig.* 2.
STAMINA: FILAMENTA quinque, inæqualia, corolla breviora, ſubulata, compreſſa, viſcoſa, baſi connata. ANTHERÆ incumbentes, ſubſagittatæ. *fig.* 3.	STAMINA: five FILAMENTS, unequal, ſhorter than the corolla, tapering, flattened, viſcid, growing together at bottom. ANTHERÆ incumbent, ſomewhat arrow-ſhaped. *fig.* 3.
PISTILLUM: GERMEN ſubrotundum. STYLUS filiformis, longitudine ſtaminum, peractâ floreſcentiâ elongatus. STIGMA obtuſum. *fig.* 4.	PISTILLUM: GERMEN roundiſh. STYLE filiform, the length of the ſtamina, lengthened out as the flowers go off. STIGMA blunt. *fig.* 4.
PERICARPIUM: CAPSULA globoſa, unilocularis, decemvalvis.	SEED-VESSEL a globular capſule of one cavity, and ten valves.
SEMINA plurima, minima.	SEEDS numerous, very minute.
RECEPTACULUM globoſum, maximum.	RECEPTACLE globular, and very large.

Some of the ancient writers attributed a very ſingular property to this plant; no leſs than a power of taming ferocious, and reconciling diſcordant animals; and hence they derive its name of *Lyſimachia* *. Others attribute the origin of its name to the learned and brave LYSIMACHUS, who, they ſay, was its firſt diſcoverer: however this be, our Engliſh name of *Looſe-ſtriſe* appears evidently to be founded on the power thus idly aſcribed to it.

This herb, though not ſo common as its name ſeems to imply, is tolerably frequent about *London*, in moiſt meadows, and by water-ſides, eſpecially in the environs of the *Thames*.

It varies much in the number of the leaves at the joints, and conſequently in the angular appearance of its ſtalk. The twiſted tips of the Calyx, though very remarkable, do not appear to have been noticed by authors.

Such as wiſh to ornament the edge of a river, or piece of water, cannot ſelect a more proper plant; but its beautiful effect will be heightened by planting with it the *Lythrum Salicaria*; both of theſe have ſtrong perennial roots, and will alſo readily grow in gardens where the ſoil is moiſt.

It flowers in *July* and *Auguſt*.

Some aſcribe to it the power of dying green.

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* A *pugna dirimenda* for λύειν τὴν μάχην *eſt certamen dirimire*, of taking away ſtrife or debate between beaſts, not only thoſe that are yoked together, but even thoſe that are wild alſo, by making them tame and quiet, which, as they ſay, this herb will do, if it be either put about their yokes or their necks, which how true I leave to them who ſhall try and find it ſo. *Parkins*, p. 544.

Chenopodium Olidum. Stinking Blite, or Orach.

CHENOPODIUM *Lin. Gen. Pl.* Pentandria Digynia.

Cal. 5-phyllus, 5-gonus. *Cor.* o. *Semen* 1. lenticulare ſuperum.

Raii Syn. Gen. 5. Herbæ flore imperfecto seu stamineo vel apetalo potius.

CHENOPODIUM *Vulvaria* foliis integerrimis, rhomboideo-ovatis, floribus conglomeratis axillaribus. *Lin. Syſt. Vegetab. p.* 216. *Sp. Pl.* 321. *Fl. Suec.* 222.

CHENOPODIUM caule diffuſo, foliis obtuſe lanceolatis. *Haller hiſt. n.* 1577.

CHENOPODIUM *Vulvaria. Scopoli Fl. Carn. n.* 281.

ATRIPLEX fœtida. *Bauh. Pin.* 119.

ATRIPLEX olida. *Ger. emac.* 327.

ATRIPLEX ſylveſtris fœtida. *Park.* 749.

BLITUM fœtidum Vulvaria dictum. *Raii Syn. p.* 156. Stinking Orache. *Hudſon Fl. Angl. ed.* 2. *p.* 107. *Lightfoot Fl. Scot. p.* 149.

Tota planta farina alba pellucida adſperſa.	The whole plant ſprinkled with a white pellucid meal.
RADIX annua, fibroſa.	ROOT annual and fibrous.
CAULES plures, diffuſi, teretes, ſubſtriati, nudiuſculi.	STALKS numerous, ſpreading, round, ſomewhat ſtriated, and thinly beſet with leaves.
FOLIA alterna, petiolata, rhomboideo-ovata, integerrima.	LEAVES alternate, ſtanding on footſtalks, rhomboid-ovate, perfectly entire.
FLORES axillares et terminales, denſe glomerati, ſubſpicati.	FLOWERS axillary and terminal, thickly cluſtered, and ſomewhat ſpiked.
FRUCTIFICATIO a reliquis hujus generis vix diverſa.	FRUCTIFICATION ſcarcely different from the reſt of this genus.
Fig. 1. exhibet Calycem, Stamina, cum Piſtillo.	*Fig.* 1. exhibits the Calyx, with the Stamina and Piſtillum.
Fig. 2. Semen Calyce incluſum.	*Fig.* 2. The Seed encloſed by the Calyx.
Fig. 3. Semen ſeorſim. Omnia auct.	*Fig.* 3. The Seed ſeparate. All magnified.

There is ſome difficulty in aſcertaining ſeveral of the plants of this genus, but that difficulty cannot be alleged againſt the preſent ſpecies, as it is at all times, both freſh and dried, diſcoverable by its ſmell alone; the whole plant, if ever ſo ſlightly bruiſed betwixt the thumb and fingers, communicating a very permanently diſagreeable odour, reſembling, in the opinion of moſt perſons, ſtale ſalt fiſh: it is, moreover, a procumbent plant.

This ſpecies is very common in the neighbourhood of London, on dry banks, and at the foot of walls and paling, where it flowers from July to September. Lewis errs egregiouſly when he ſays it naturally delights in moiſt places.

It is a plant of little conſequence, except in a medicinal point of view, and in that its virtues are, perhaps, ill-founded; it retains, however, a place in the London and Edinburgh Diſpenſatories.

" Stinking Orache, on account of its ſtrong ſcent, is reckoned an uſeful antihyſteric; in which intention, " ſome recommend a conſerve of the leaves, others a watery infuſion, and others a ſpirituous tincture of " them. On ſome occaſions it may, perhaps, be preferable to the fetids, which have been more commonly " made uſe of, as not being accompanied with any pungency or irritation, and ſeeming to act merely by " virtue of its odorous principle." *Lewis's Mat. Med. p.* 124.

Chenopodium olidum

Scandix Pecten. Shepherds Needle, or Venus's Comb.

SCANDIX *Lin. Gen. Pl.* Pentandria Digynia.

Corolla radiata. *Fructus* ſubulatus. *Petala* emarginata. *Floſculi* diſci ſæpe maſculi.

Raii Syn. Gen. 11. Umbelliferæ Herbæ.

SCANDIX *Pecten* ſeminibus lævibus roſtro longiſſimo. *Lin. Syſt. Veget. ed.* 14. *p.* 287. *Sp. Pl. p.* 368.

MYRRHIS ſeminis cornu longiſſimo. *Haller hiſt. n.* 754.

SCANDIX *Pecten. Scopoli Fl. Carn. n.* 349.

SCANDIX ſemine roſtrato vulgaris. *Bauh. Pin.* 152.

PECTEN VENERIS I. B. III. 2. 71.

PECTEN VENERIS ſeu ſcandix. *Ger. emac. p.* 1040.

SCANDIX vulgaris, ſeu Pecten Veneris. *Park.* 916. *Raii Syn. p.* 207. Shepherds Needle, or Venus's Comb. *Hudſon Fl. Angl. ed.* 2. *p.* 123. *Lightfoot Fl. Scot. p.* 166. *Jacquin Fl. Auſtr. t.* 263.

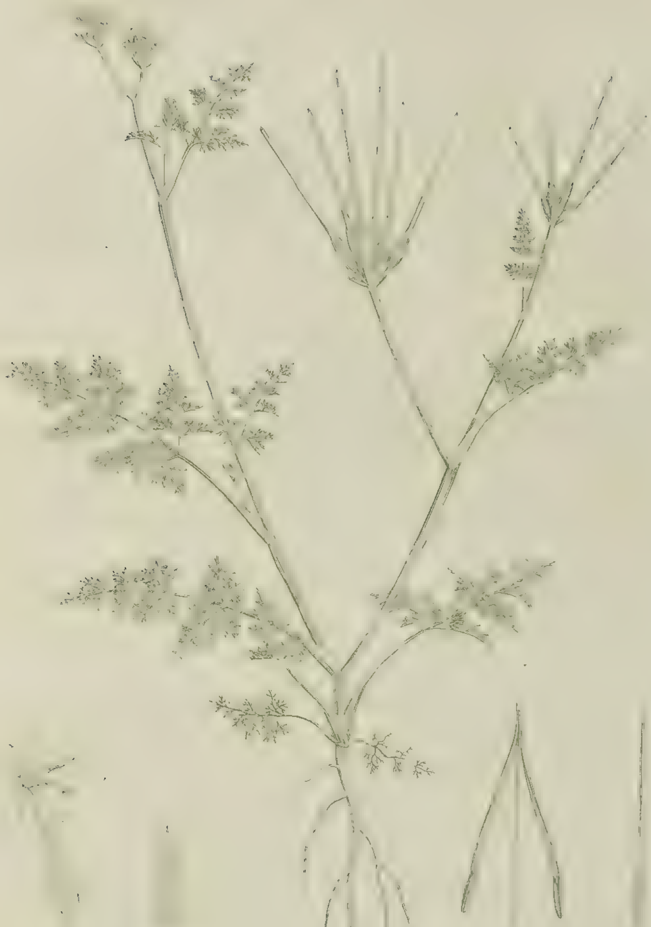
RADIX annua, ſimplex, albida, paucis fibrillis inſtructa.	ROOT annual, ſimple, whitiſh, furniſhed with few fibres.
CAULIS nunc ſolitarius, nunc plures ex eadem radice, ramoſi, diffuſi, villoſi, ſemipedales, aut pedales, inferne purpurei, aut lineis purpureis ſtriati, teretes, ad geniculos vix incraſſati.	STALK ſometimes ſingle, ſometimes ſeveral from the ſame root, branched, ſpreading, villous, half a foot or a foot in height, below purple, or ſtriped with purple lines, round, and ſcarcely thickened at the joints.
FOLIA dauci inſtar tenuiter diviſa, ad baſin vaginantia, laciniis linearibus, bifidis trifidiſve, acutis, ad lentem rariter ciliatis, *fig.* 1.	LEAVES finely divided like thoſe of wild carrot, forming a ſheath at bottom, ſegments linear, bifid or trifid, pointed, and, if viewed with a microſcope, thinly edged with hairs, *fig.* 1.
INVOLUCRUM *univerſale* nullum.	INVOLUCRUM: *general* Involucrum wanting.
UMBELLA: univerſalis plerumque biradiata.	UMBEL: general Umbel uſually compoſed of two radii.
INVOLUCRUM *partiale* magnum, pentaphyllum, foliolis nervoſis, ciliatis, bifidis.	INVOLUCRUM: *partial* Involucrum large, five-leaved, leaflets ribb'd, edged with hairs, and bifid.
FLORES *Umbellulæ* quinque ad ſeptem, plerumque fertiles, albæ.	FLOWERS of the ſmall *Umbel* from five to ſeven, for the moſt part fertile and white.
COROLLA: Petala quinque, obverſe ovata, apice inflexa, patentia, exteriore majore, *fig.* 2.	COROLLA: five Petals, inverſely ovate, bent in at the tip, ſpreading, the outermoſt petal largeſt, *fig.* 2.
STAMINA: Filamenta quinque, alba; Antheræ primo vireſcentes, demum nigricantes, *fig.* 3.	STAMINA five white Filaments; Antheræ firſt greeniſh, finally blackiſh, *fig.* 3.
PISTILLUM: Germen breviſſime pedicellatum, oblongum, hirſutulum; Styli duo, ſubulati, erecti, perſiſtentes; Stigmata ſimplicia, *fig.* 4, 5.	PISTILLUM: Germen ſtanding on a very ſhort footſtalk, oblong and ſlightly hirſute; Styles two, tapering, upright and permanent; Stigmata ſimple, *fig.* 4, 5.
SEMINA duo, fuſca, hinc convexa, ſtriata, inde plana hirſutula, in roſtrum longiſſimum excurrentia, *fig.* 7.	SEEDS two, brown, convex and ſtriated on one ſide, and flat on the other, ſlightly hirſute, running out into a very long beak, *fig.* 7.
NECTARIUM: ad baſin ſtylorum, purpurei coloris, *fig.* 6.	NECTARY at the baſe of the ſtyles, of a purple colour, *fig.* 6.

Common in corn fields, not only in Great-Britain, but in all the ſouthern parts of Europe, ſometimes ſo plentiful, as to prove injurious to the farmer.

Is particularly diſtinguiſhed from all our other umbelliferous plants by the uncommon length of the beak of the ſeeds, as well as by the ſingularity of the leaves of the Involucellum, which are uncommonly large and bifid.

Flowers in June, and ripens its ſeed in July.

Its ſeed-leaves, on their firſt appearance above ground, are uncommonly long.



Linum usitatissimum. Common Flax.

LINUM *Lin. Gen. Pl.* Pentandria Pentagynia.

Cal. 5-phyllus. *Petala* 5. *Capſ.* 5-valvis, 10-locularis. *Sem.* ſolitaria.

Raii Syn. Gen. 24. Herbæ Pentapetalæ Vasculiferæ.

LINUM *uſitatiſſimum* calycibus capſuliſque mucronatis, petalis crenatis, foliis lanceolatis alternis, caule ſubſolitario. *Lin. Syſt. Vegetab. p.* 249. *Sp. Pl. p.* 397.

LINUM *arvenſe.* *Baub. Pin.* 214.

LINUM ſylveſtre vulgatius. *Park.* 1334. *Ger. emac.* 556. *Raii Syn. p.* 362. Manured Flax. *Hudſon. Fl. Angl. ed.* 2. *p.* 133. *Lightfoot Fl. Scot. p.* 173.

RADIX annua, ſimplex, fibroſa, pallide fuſca.	ROOT annual, ſimple, fibrous, of a pale brown colour.
CAULIS erectus, ſeſquipedalis, bipedalis et ultra, teres, glaber, folioſus, ſuperne tantum ramoſus.	STALK upright, a foot and a half, two feet high or more, round, ſmooth, leafy, branched above only.
FOLIA lanceolata, ſeſſilia, conferta, ſparſa, ſuberecta, integerrima, lævia, trinervia.	LEAVES lanceolate, ſeſſile, growing thickly together, without any regular order, almoſt upright, perfectly entire.
FLORES majuſculi, pulchre cærulei, paniculati.	FLOWERS large, of a beautiful blue colour, growing in a panicle.
PEDUNCULI teretes, glabri.	FLOWER-STALKS round and ſmooth.
CALYX: Perianthium 5-phyllum, foliolis ovatis, acuminatis, carinatis, perſiſtentibus, margine membranaceis, ad lentem ciliatis, *fig.* 1.	CALYX: a Perianthium of five leaves, which are ovate, pointed, keeled, permanent, the edge membranous, and if magnified fringed with hairs, *fig.* 1.
COROLLA: Petala 5, cæruleſcentia, cuneifolia, decidua, venis ſaturatioribus picta, unguibus albis, apicibus ſuberoſis, *fig.* 2.	COROLLA: 5 blueiſh, wedge-ſhaped, deciduous Petals, ſtreaked with veins of a deeper colour, claws white, tips ſomewhat gnawed, *fig.* 2.
STAMINA: Filamenta quinque, alba, ſubulata, baſi dilatata. Antheræ primo oblongæ, demum ſagittatæ, *fig.* 3. incumbentes, cæruleæ, ad ſtylos inclinatæ et ſubcoadunatæ, *fig.* 3. 4.	STAMINA: five white tapering Filaments, dilated at the baſe. Antheræ at firſt oblong, finally arrow-ſhaped, *fig.* 3. incumbent, of a blue colour, inclined to the ſtyles, and ſomewhat united, *fig.* 3, 4.
PISTILLUM: Germen ovatum, nitidum. Styli quinque, longitudine filamentorum, ſub-clavati, cæruleſcentes, apice leviter cohærentes. Stigmata ſimplicia, *fig.* 5.	PISTILLUM: Germen ovate, ſhining. Styles five, the length of the filaments, ſomewhat club-ſhaped, blueiſh, ſlightly cohering. Stigmata ſimple, *fig.* 5.
PERICARPIUM: Capsula globoſa, ſubangulata, mucronata, decemlocularis, quinquevalvis, *fig.* 6.	SEED-VESSEL: a globular, ſomewhat angular and pointed Capsule, having ten cavities, and five valves, *fig.* 6.
SEMINA in ſingulo loculamento ſolitaria, ovato-acuta, compreſſa, nitida, *fig.* 7.	SEEDS one in each cavity, ovate, pointed, flat and gloſſy, *fig.* 7.

It may be doubted, perhaps, whether the common flax, found in any part of the kingdom, may not originally have been introduced from abroad; yet Mr. Hudson ſpeaks of it as a common plant in Dorſetſhire and Devonſhire, and entertains no idea of its being a doubtful native. However this may be, the few ſpecimens of it which we find occaſionally in corn fields and among rubbiſh, particularly in the neighbourhood of Batterſea (for flax is not cultivated near London), have doubtleſs been introduced there with the produce of the garden or the corn field.

It flowers in June and July.

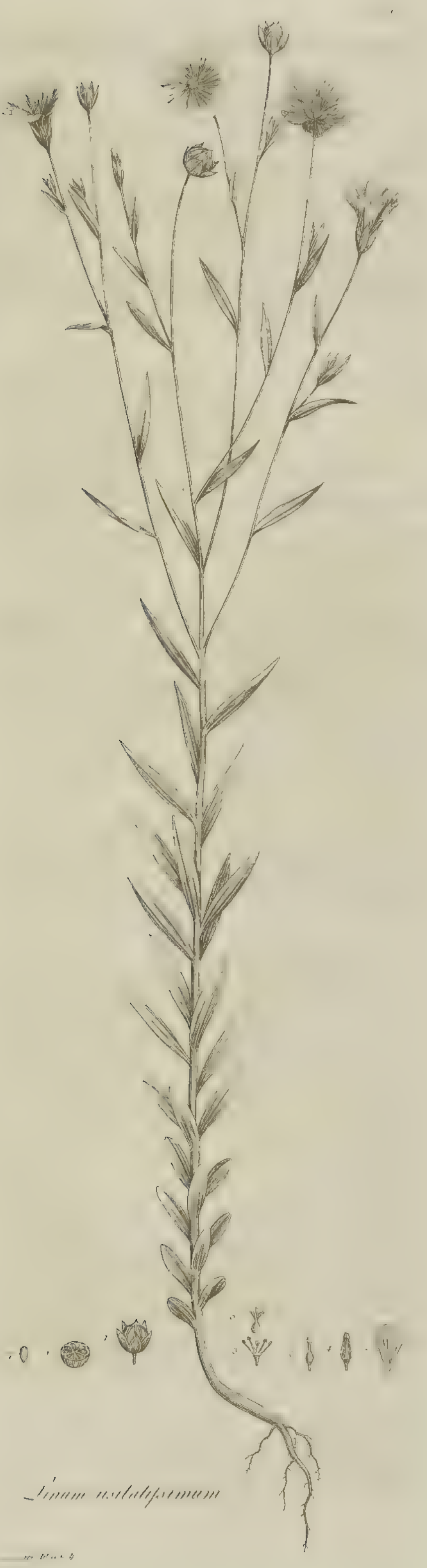
In the earlieſt record we have, flax is mentioned as a plant cultivated in Egypt (Exodus ch. ix. v. 31.); for which reaſon antiquaries have been ſurpriſed to find the veſtments of mummies made of cotton. It is highly probable, however, that mankind made thread of cotton before the uſe of flax was diſcovered; for cotton is produced in a ſtate ready for ſpinning, whereas flax requires a long proceſs before it can be brought to that ſtate.

In the ſimplicity of former times, when families in this iſland provided within themſelves moſt of the neceſſaries and conveniencies of life, every garden ſupplied a proper quantity of hemp and flax; but the macerating or ſteeping, which was neceſſary to ſeparate the thread by rotting the ſtalk, was in many places found to render the water ſo offenſive and detrimental, that in the reign of Henry VIII. a law was made that "*No perſon ſhall water* " *any hemp or flax in any river, running water, ſtream, brook, or other common pond, where beaſts are uſed to be watered,* " *on pain of forfeiting, for every time ſo doing, twenty ſhillings.* 33 Hen. VIII. c. 17. § 1. Might not this inconvenience be prevented, and the proceſs much accelerated, by uſing boiling water, and a proper quantity of the aſhes of any vegetable? *Vid.* below.

The wiſdom of Parliament hath lately thought proper to encourage, by a premium, the growth of hemp and flax in this kingdom, certainly with a very laudable intention, as long as we procure theſe articles from countries where the balance of trade is againſt us; or, in other words, while we continue to pay for them in money, and not with our manufactures. The premium is four pence for every fourteen pounds of flax.

The ancients were of opinion, that flax impoveriſhed land. "Urit enim lini campum ſeges." *Virg. G.* I. v. 77. But, while ſpeculative and practical cultivators unfortunately continue to be ſuch very diſtinct people, the rules which we find in books cannot be much depended on. However, it may be a caution to thoſe who have not a plentiful command of manure not to engage too largely with this plant without proper trials. As flax will be new

to



Linum usitatissimum

[illegible]

to moſt of the land in the kingdom, there is little doubt but that the produce will at firſt be large, and it is very deſireable to introduce a new kind of grain into huſbandry to extend the ſucceſſion of crops.

> "*For the viciſſitudes of various grain*
> "*Tend to preſerve the vigour of the plain.*"

Flax not only ſupplies us with cloathing, but its ſeeds, well known by the name of lin-ſeed, afford an oil of great uſe in painting, varniſhing, &c. They are alſo uſed medicinally. Infuſions of lin-ſeed, like other mucilaginous liquors, are uſed as emollients, incraſſants, and obtunders of acrimony, in heat of urine, ſtranguries, thin defluxions on the lungs, and other like diſorders. A ſpoonful of the ſeeds, unbruiſed, is ſufficient for a quart of water, larger proportions rendering the liquor diſagreeably ſlimy. The mucilage obtained by inſpiſſating the infuſions or decoctions is an excellent addition for reducing diſguſtful powders into the form of an electuary, occaſioning the compound to paſs the fauces freely, without ſticking or diſcovering its taſte in the mouth. The expreſſed oil is ſuppoſed to be more of a healing and balſamic nature than the other oils of this claſs, and has been particularly recommended in coughs, ſpitting of blood, cholics, and conſtipations of the belly. The ſeeds in ſubſtance, or the matter remaining after the expreſſion of the oil, are employed externally in emollient and maturating cataplaſms. In ſome places theſe ſeeds in times of ſcarcity have ſupplied the place of grain; but appeared to be an unwholeſome as well as an unpalatable food. *Tragus* relates, that thoſe who fed on them in Zealand had the hypochondres in a ſhort time diſtended, and the face and other parts ſwelled; and that not a few died of theſe complaints.

The following reflections communicated to me by a friend will, I flatter myſelf, not be unacceptable to my readers. Should practice juſtify the theory, I will venture to ſay, they will be golden reflections to the nation.

Some reflections relative to the watering of flax by a new method, ſo as to ſhorten labour, add to the ſtrength of the flax, and give it a much finer colour, which would render the operation of bleaching ſafer and leſs tedious.

THOUGH the following reflections have for their object an improvement in the very eſſential article of watering of flax, yet I muſt advertiſe my reader, that they are only theory, and muſt depend entirely for their truth and juſtification upon future experiments, ſkilfully and judiciouſly made. Should repeated trials prove the advantage of the method propoſed, we may venture to affirm, it would be an improvement that would increaſe the national income in the agricultural branch many thouſand pounds annually, would add greatly to the perfection of the linen manufacture, and over and above would ſuppreſs a very diſagreeable nuiſance, which the preſent method of watering flax occaſions during ſome part of the ſummer in every flax-growing country.

The intention of watering flax is, in my opinion, to make the boon more brittle or friable, and by ſoaking to diſſolve that gluey kind of ſap that makes the bark of plants and trees adhere, in a ſmall degree, to the woody part. The bark is called the harle, and produces the flax; the uſeleſs woody part, which remains when the bark is ſeparated, the boon. To effect this ſeparation eaſily, the practice has long prevailed of ſoaking the flax in water to a certain degree of fermentation, and afterwards drying it. For this ſoaking ſome prefer rivulets that have a ſmall current, and others ſtagnant water in ponds and lakes. In both theſe ways the water acts as in all other caſes of infuſion and maceration. After two or three weeks it extracts a great many juices of a very ſtrong quality, which in ponds give the water an inky tinge, and offenſive ſmell, and in rivulets mix in the ſtream, and kill the fiſh.

Nay, if this maceration is too long continued, the extracted and fermented ſap will completely kill the flax itſelf: for if, inſtead of two or three weeks, the new flax were to lay ſoaking in the water four or five months, I preſume it would be good for nothing but to be thrown upon the dunghill. Both harle and boon would in that time be completely rotted; yet the harle or flax, when entirely freed from this ſap, and manufactured into linen, or into ropes, might be many months under water without being much damaged. As linen, it may be waſhed, ſteeped, and boiled in ſcalding water twenty times, without loſing much of its ſtrength: and as paper, it acquires a kind of incorruptibility.

It appears then eſſential, to the right management of new flax, to get rid of this pernicious vegetative ſap, and to macerate the boon; but from the complaints made againſt both the methods of watering now in uſe, there is reaſon to think, that there is ſtill great room for improvement in that article. In rivulets, the vegetative ſap, as it is diſſolved, is carried off by the current, to the deſtruction of the fiſh. This prevents the flax from being ſtained; but the operation is tedious, and, I have been told, often not complete, from the uncertainty of knowing the preciſe times when it is juſt enough, and not too much, or perhaps from neglect. In ponds, the inky tinge of the water often ſerves as a kind dye to the flax, which imbibes it ſo ſtrongly, that double the labour in bleaching will hardly bring the linen made of ſuch flax to an equality in whiteneſs with linen made of flax untinged. This ſeems to be equally unwiſe, as though we were to dye cotton black firſt, as a means to whiten it afterwards. Theſe ponds beſides become a great nuiſance to the neighbourhood: the impregnated water is often of ſuch a pernicious quality, that cattle, however thirſty, will not drink of it, and the effluvia of it may perhaps be nearly as infectious as it is offenſive. If this effluvia is really attended with any contagious effects in our cold climates, a thing worth enquiring into, how much more pernicious muſt its effects have been in the hot climate of Egypt, a country early noted for its great cultivation of flax!

From theſe conſiderations I have been led to think, that the proceſs of watering might be greatly improved and ſhortened by plunging the new flax, after it is rippled, into ſcalding water, which, in regard to extracting the vegetative ſap, would do in five minutes more than cold water would do in a fortnight, or perhaps more than cold water could do at all, in reſpect to the clearing the plant of that ſap. Rough almonds, when thrown into ſcalding water, are blanched in an inſtant; but perhaps a fortnight macerating thoſe almonds in cold water would not make them part ſo eaſily with their ſkins, which are the ſame to them as the harle to the flax. Were tea leaves to be infuſed in cold water a fortnight, perhaps the tea produced by that infuſion would not be ſo good to the taſte, nor ſo ſtrongly tinged to the eye, as what is effected by ſcalding water in five minutes. By the ſame analogy, I think, flax, or any ſmall twig, would be made to part with its bark much eaſier and quicker, by being dipped in boiling water, than by being ſteeped in cold water. This reflection opens a door for a great variety of new experiments in regard to flax. I would therefore recommend to gentlemen cultivators and farmers to make repeated trials upon this new ſyſtem, which would ſoon aſcertain whether it ought to be adopted in practice or rejected. One thing, I
think,

think, we may be certain of, that, if the Egyptians watered their flax in our common manner, they undoubtedly watered it in very warm water, from the great heat of their climate, which probably might make them neglect to think of water heated by any other means than that of the ſun. A good general practice can only be eſtabliſhed upon repeated trials; but, I am perſuaded, many loſe half the value of their crop by ſome of the preſent methods of watering it. Though one experiment may fail, another with a little variation may ſucceed, and the importance of the object deſired to be obtained will juſtify a good degree of perſeverance in the proſecution of the means. In this view, as the Chineſe thread is ſaid to be very ſtrong, it would be worth while to be acquainted with the practice of that diſtant nation in regard to the rearing and manufacturing of flax, as well as with the methods uſed by the Flemings and the Dutch.

Boiling water perhaps might at once clear the new flax from many impurities, which, when not removed till ſpun into yarn, are then removed with difficulty, and loſs of ſubſtance to the yarn. Why ſhould not the longitudinal fibres of the flax, before they be ſpun into yarn, be made not only as fine but as clean as poſſible? Upon the new ſyſtem propoſed, the act of bleaching would begin immediately after the rippling of the flax; and a little done then might ſave much of what is generally done after the ſpinning and weaving. To ſpin dirty flax, with a view of cleaning it afterwards, appears to be the ſame impropriety as though we were to reſerve part of the dreſſing given to leather till after it is made into a glove.

Should the plunging the flax into the boiling water not ſuffice to make the boon brittle enough, as I am inclined to think it would not, then the common watering might be added; but, in this caſe, probably half the time uſually given to the watering would ſuffice, and the flax might then be laid in clear rivulets, without any apprehenſions of its infecting the water and poiſoning the fiſh, or of being diſcoloured itſelf; for the boiling water into which it had been previouſly put would have extracted all the poiſonous vegetative ſap, which, I preſume, is what chiefly diſcolours the flax, or kills the fiſh.

On the ſuppoſition that boiling water, in the preparation of flax, may be found to be advantageous and profitable, I can recollect at preſent but one objection againſt it being generally adopted. Every flax-grower, it may be ſaid, could not be expected to have conveniencies for boiling water ſufficient for the purpoſe, the conſumption of water would be great, and ſome additional expence would be incurred. In anſwer to this I ſhall only obſerve, that I preſume any additional expence would be more than reimburſed by the better marketable price of the flax; for otherwiſe any new improvement, if it will not quit coſt, muſt be dropped, were it even the ſearching after gold. In a large cauldron a great deal of flax might be dipped in the ſame water, and the conſumption perhaps would not be more than a quart to each ſheaf: even a large houſhold pot would be capable of containing one ſheaf after another; and I believe the whole objection would be obviated, were the practice to prevail with us, as in Flanders and Holland, that the flax-grower and the flax-dreſſer ſhould be two diſtinct profeſſions.

I ſhall conclude with recommending to thoſe who are inclined to make experiments, not to be diſcouraged by the failure of one or two trials. Perhaps the flax, inſtead of being juſt plunged into the ſcalding water, ought to be kept in it five minutes; perhaps a quarter of an hour; perhaps a whole hour. Should five minutes, or a quarter of an hour, or an hour, not be ſufficient to make the boon and harle eaſily ſeparate, it might perhaps be found expedient to boil the flax for more than an hour; and ſuch boiling, when in this ſtate, might in return ſave ſeveral hours boiling in the article of bleaching. It is not, I think, at all probable, that the boiling of the flax with the boon in it would prejudice the harle; for, in the courſe of its future exiſtence, it is made to be expoſed twenty or forty times to this boiling trial, and, if not detrimental in the one caſe, it is to be preſumed it would not be detrimental in the other. Perhaps after the boiling it would be proper to pile up the flax in one heap for a whole day, or for half a day, to occaſion ſome fermentation, or perhaps, immediately after the boiling, it might be proper to waſh it in cold water. The great object, when the flax is pulled, is to get the harle from the boon with as little loſs and damage as poſſible; and if this is accompliſhed in a more complete manner than uſual, conſiderable labour and expence will be ſaved in the future manufacturing of the flax. On this account, I think, much more would be gained than loſt, were the two or three laſt inches of the roots of the flax to be chopped off, or clipped off, previous to its being either watered or boiled.

The following precaution is neceſſary to be obſerved, that the flax ſhould never be ſpread out to dry at a ſeaſon when it may be in danger of being expoſed to the froſt.

LEUCOJUM ÆSTIVUM. SUMMER SNOWFLAKE.

LEUCOJUM *Lin. Gen. Pl.* HEXANDRIA MONOGYNIA.

Cor. campaniformis, 6-partita, apicibus incraſſata. *Stigma* ſimplex.

Raii Syn. Gen. 26. HERBÆ RADICE BULBOSA PRÆDITÆ.

LEUCOJUM *æſtivum* ſpatha multiflora, ſtylo clavato. *Lin. Syſt. Vegetab. p.* 316. *Sp. Pl. p.* 414. *Jacquin Fl. Auſtr. t.* 203. *v.* 4.

LEUCOJUM *æſtivum. Scopoli Fl. Carn. n.* 393.

LEUCOJUM bulboſum majus ſ multiflorum. *Bauh. Pin.* 55.

LEUCOJUM bulboſum ſerotinum majus 1. *Cluſ. hiſt.* 1. *p.* 170.

LEUCOION bulboſum polyanthemum. *Dodon. Stirp hiſt. p.* 230. The great late flowering Bulbous Violet. *Park. Parad. p.* 110.

RADIX: *Bulbus* magnitudine nucis caſtaneæ, ſubovatus, extus pallide fuſcus, intus albus, tunicatus, lamellis plurimis, tenuibus, denſe compactis.	ROOT: a *Bulb* the ſize of a cheſnut, ſomewhat ovate, externally of a pale brown colour, internally white, coated, the coats numerous, thin, and cloſely compacted.
FOLIA plurima, ſeſquipedalia, erecta, ſublinearia, ſaturate viridia, unciam fere lata, obtuſa, ſuperne plana, inferne leviter carinata, carina obtuſa, exteriora breviora.	LEAVES numerous, about a foot and a half in length, upright, nearly linear, of a deep green colour, almoſt an inch in breadth, obtuſe, above flat, beneath ſlightly keeled, the keel obtuſe, the lowermoſt leaves ſhorteſt.
SCAPUS foliis paulo altior, multiflorus, fiſtuloſus, ſubcompreſſus, anceps, ſubtortuoſus, uno latere nonnunquam obtuſo, altero acuto.	STALK a little higher than the leaves, ſupporting many flowers, hollow, ſlightly flattened, two-edged, a little twiſted, one ſide ſometimes obtuſe, the other acute.
PEDUNCULI plerumque quinque ex eadem ſpatha, uniflori, angulati, longitudine inæquales.	FLOWER-STALKS for the moſt part five proceeding from the ſame ſheath, each ſupporting a ſingle flower, angular, and of unequal lengths.
FLORES albi, penduli, ſecundi, vix odori.	FLOWERS white, pendulous, growing all one way, with little ſcent.
COROLLA campaniformi-patens, *Petala* ſex, ovata, alba, intus ſtriata, baſi minime cohærentia, apicibus craſſiuſculis, ſtrictioribus, macula viridi inſignitis.	COROLLA ſomewhat bell-ſhaped, ſpreading, *Petals* ſix, ovate, white, finely grooved within ſide, not at all uniting at bottom, tips thickiſh, a little puckered, and marked with a green ſpot.
STAMINA: FILAMENTA ſex, alba, filiformia: ANTHERÆ oblongæ, ſubquadrangulares, erectæ, luteæ, apice poris duobus dehiſcentes, *fig.* 1, 2.	STAMINA ſix white, thread-ſhaped FILAMENTS: ANTHERÆ oblong, ſomewhat quadrangular, upright, yellow, each cell open at top, *fig.* 1, 2.
PISTILLUM: GERMEN ſubovatum, inferum: STYLUS albus, ſtaminibus paulo longior, inferne attenuatus, ſuperne vireſcens; STIGMA breve, ſetaceum, erectum, acutum, *fig.* 3.	PISTILLUM GERMEN ſomewhat ovate, beneath; STYLE white, a little longer than the ſtamina, tapering downwards, above greeniſh; STIGMA like a ſmall, ſhort, upright, pointed briſtle, *fig.* 3.
PERICARPIUM: CAPSULA ſubpyriformis, membranacea, trilocularis, trivalvis, *fig.* 4.	SEED-VESSEL: a CAPSULE ſomewhat pear-ſhaped, membranous, having three cavities and three valves, *fig.* 4.
SEMINA plura, majuſcula, ſubrotunda, atra, nitentia, *fig.* 5.	SEEDS ſeveral, ſomewhat large, nearly round, black, and gloſſy, *fig.* 5.

Flowers about the middle of May.

Is found *undoubtedly wild*, betwixt *Greenwich* and *Woolwich*, about half a mile below the former, cloſe by the Thames ſide, juſt above high water mark, growing (where no garden, in all probability, could ever have exiſted) with *Arundo Phragmites*, *Caltha paluſtris*, *Oenanthe crocata*, and *Angelica ſylveſtris*: Prof. JACQUIN, who figures it in the *Flora Auſtriaca*, and SCOPOLI, in his *Flora Carniolica*, deſcribe it as growing in ſimilar ſituations; their words are, *creſcit in pratis udis et ſub paluſtribus.* It has alſo been found in the *Iſle of Dogs*, which is the oppoſite ſhore.

How ſo ornamental a plant, growing in ſo public a place, could have eſcaped the prying eyes of the many Botaniſts who have reſided in London for ſuch a length of time, ſeems ſtrange: for my own part, I am perfectly ſatisfied of its being a native of our iſland, and have no doubt but it will be found in many other parts of it.

The figure we have given, was drawn on the ſpot above deſcribed, where it grows more luxuriantly than we uſually ſee it in gardens; the reaſon of which is, that in gardens it ſeldom has a ſoil or ſituation ſufficiently moiſt.

The older Botaniſts, and even TOURNEFORT, united it with the Snowdrop; and in our gardens it is generally known by the name of the *great Summer Snowdrop;* but as it differs very eſſentially in its fructification from the *Galanthus*, we have thought it neceſſary to give it the new Engliſh name of *Snowflake*, to correſpond in ſome degree with the Linnæan generic name *Leucojum.*

Leucojum æstivum.

Convallaria majalis

CONVALLARIA MAJALIS. LILY OF THE VALLEY.

CONVALLARIA *Lin. Gen. Pl.* HEXANDRIA MONOGYNIA.

Cor. ſexfida. *Bacca* maculoſa 3-locularis.

Raii Syn. Gen. 16. HERBÆ BACCIFERÆ.

CONVALLARIA *majalis* ſcapo nudo. *Lin. Syſt. Vegetab.* p. 275. *Spec. Plant.* p. 451. *Flor. Suec.* n. 292.

POLYGONATUM ſcapo diphyllo, floribus ſpicatis, nutantibus, campaniformibus. *Haller. Hiſt.* n. 1241.

CONVALLARIA *majalis. Scopoli Fl. Carn.* n. 418.

LILIUM convallium album. *Baub. Pin* p. 304.

LILIUM convallium. *Ger. Emac.* p. 410. flore albo, *Parkins. Parad.* p. 349. *Raii Syn.* p. 264. Lily-convally or May Lily. *Hudſon. Fl. Angl.* ed. 2. p. 146. *Lightfoot, Fl. Scot.* p. 182.

RADIX perennis, fibroſa, fibris plurimis, teretibus, tranſverſim rugoſis, horizontaliter paulo infra terram in longum extenſis, repentibus.	ROOT perennial, fibrous, fibres numerous, round, tranſverſely wrinkled, extending horizontally juſt below the ſurface of the earth, and creeping to a conſiderable diſtance.
SQUAMÆ quatuor, vel quinque, ſubnervoſæ, purpuraſcentes, alternæ, baſin foliorum et ſcapi obveſtiunt et colligant.	SCALES four or five ſlightly ribbed, purpliſh, alternate ſcales ſurround and bind together the baſe of the leaves and ſtalk.
FOLIA bina, petiolata, ovata, utrinque acuta, erecta, lævia, nervoſa, altero plerumque majori, læte viridia, petiolis teretibus, exteriore punctis rubris adſperſo, tubuloſo ad recipiendum interiorem ſolidum.	LEAVES growing two together, ſtanding on foot-ſtalks, pointed at each end, upright, ſmooth ribbed, one generally larger than the other, of a bright green colour, foot-ſtalks round, the outermoſt dotted with red, and tubular to receive the inner one which is ſolid.
SCAPUS lateralis, longitudine foliorum, erectus, nudus lævis, ſemicylindraceus.	STALK lateral, the length of the leaves, upright, naked, ſmooth, ſemicylindrical.
BRACTÆA lanceolata, membranacea, ſub ſingulo pedunculo, pedunculo brevior.	FLORAL-LEAF lanceolate, membranous, under each flower-ſtalk, ſhorter than the flower-ſtalk.
FLORES ſex, ſive octo, racemoſi, nutantes, albi ſeu luteſcentes, odorati.	FLOWERS ſix or eight, growing in a racemus, hanging down, white or yellowiſh, and ſweet-ſcented.
PEDUNCULI uniflori, teretes, filiformes.	FLOWER-STALKS one flowered, round, and filiform.
CALYX nullus.	CALYX wanting.
COROLLA monopetala, globoſo-campanulata. *Limbus* ſexfidus, laciniis obtuſiuſculis, reflexis, *fig.* 1.	COROLLA monopetalous, roundiſh, bell-ſhaped. The *Limb* divided into ſix obtuſe reflexed ſegments, *fig.* 1.
STAMINA: FILAMENTA ſex, ſubulata, petalo inſerta, corolla breviora. ANTHERÆ oblongæ, erectæ, biloculares, flavæ, longitudine filamentorum, *fig.* 2.	STAMINA: ſix FILAMENTS tapering, inſerted into the petal, and ſhorter than the corolla. ANTHERÆ oblong, upright, bilocular, yellow, the length of the filaments, *fig.* 2.
PISTILLUM: GERMEN ſubrotundum, viride. STYLUS filiformis, ſtaminibus longior. STIGMA obtuſum, trigonum, *fig* 3.	PISTILLUM: GERMEN roundiſh, green. STYLE filiform, longer than the ſtamina. STIGMA obtuſe, and three-cornered, *fig.* 3.
PERICARPIUM: BACCA globoſa, majuſcula, rubra, trilocularis, polyſperma, *fig.* 4.	SEED-VESSEL a round, largiſh, red BERRY, having three cavities, and containing many ſeeds, *fig.* 4.
SEMINA quinque et ultra majuſcula, luteſcentia, hinc convexa, inde plana ſeu angulata, *fig.* 5, 6.	SEEDS five and more, largiſh, yellowiſh, convex on one ſide, and flat or angular on the other, *fig.* 5, 6.

LINNÆUS, in his *Flora Lapponica*, p. 80. gives his reaſons at large for uniting in one genus the *Lilium convallium*, the *Polygonatum*, and *Unifolium*, and for adopting the name *Convallaria*.

The Lily of the Valley claims our notice as an ornamental and a medicinal plant. As an ornamental one, few are held in greater eſtimation; indeed, few are the flowers which can boaſt ſuch delicacy with ſuch fragrance; fortunately it is moſt eaſy of cultivation, requiring only to be placed in the ſhady part of a garden, and to be tranſplanted now and then, when the roots are too much matted together to produce flowers freely. It bears forcing admirably in pots, and hence the curious may have it in bloſſom at leaſt two months in the year.

There is a variety of it with reddiſh flowers and double bloſſoms. In its wild ſtate it is ſeldom ſeen in berry; but produces them readily when cultivated. Like many of thoſe plants which are eagerly ſought after, it is now become rather ſcarce in the neighbourhood of London. In Mr. RAY's time it grew plentifully on Hampſtead-Heath, but is now ſparingly found there. In Lord Mansfield's wood, near the Spaniard, it may be met with in greater abundance; nor is it uncommon in the woods about Dulwich. It flowers in May and June.

The flowers readily impart their fragrance, as well as a penetrating bitteriſh taſte, both to watery and ſpirituous menſtrua. Their odorous matter, like that of the white Lily, is very volatile, being totally diſſipated in exſiccation, and elevated in diſtillation; nor does the diſtilled ſpirit turn milky on the admixture of water, as thoſe ſpirits do which are impregnated with actual oil. The pungency and bitterneſs, on the other hand, reſide in a fixed matter, which remains entire both in the watery and ſpirituous extracts, and which in this concentrated ſtate approaches, as CARTHEUSER obſerves, to hepatic Aloes.

It is principally from the volatile parts of theſe flowers, that medicinal virtues have been expected in nervous and and catarrhous diſorders; but probably their fixt parts alſo, which have no ſmell, have perhaps the greateſt ſhare in their efficacy. The flowers, dried and powdered, and thus diveſted of their odoriferous principle, prove ſtrongly ſternutatory. Watery or ſpirituous extracts made from them, given in doſes of a ſcruple or half a dram, act as gentle ſtimulating aperients and laxatives, and ſeem to partake of the purgative virtue as well as of the bitterneſs of Aloes.

The roots poſſeſs a greater degree of bitterneſs, and a ſimilar purgative quality. *Lewis's Mat. Med.*

JUNCUS PILOSUS. SMALL HAIRY WOOD-RUSH.

JUNCUS *Lin Gen. Pl.* HEXANDRIA MONOGYNIA.

Cal. 6-phyllus, *Cor.* o. *Capſ.* 1-locularis.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

JUNCUS *piloſus* foliis planis piloſis, corymbo ramoſo. *Lin. Syſt. Vegetab. p.* 280. *Sp. Pl.* 468. *Fl. Suec.* 308.

JUNCUS foliis planis, hirſutus, floribus umbellatis, ſolitariis, petiolatis, ariſtatis. *Haller hiſt. n.* 1325.

JUNCUS *piloſus. Scopoli Fl. Carn. n.* 435.

GRAMEN nemoroſum hirſutum latifolium minus. *Bauhin pin.* 7.

GRAMEN nemoroſum hirſutum. *Ger. emac.* 19. majus *Park.* 1184.

GRAMEN nemoroſum hirſutum vulgare. *Raii Syn. p.* 416. Small hairy Wood-Ruſh. *Hudſon. Fl. Angl. p.* 151. *Lightfoot. Fl. Scot. p.* 186.

RADIX perennis, fibroſa, fibris numeroſis, fuſcis, ſtolonibus brevibus acutis quoque inſtruitur, ita ut ſubrepens dici poteſt.

CULMI plures, ex eadem radice, ſpithamæi et ultra, ſubereĉti, folioſi, ſuperne nudi, ſimplices, læves, ſtriati, teretes, tribus aut quatuor geniculis minime protuberantibus inſtruĉti.

FOLIA radicalia plurima, tres quatuorve uncias longa, lineas tres, treſque cum dimidiâ lata, ad baſin paulo anguſtiora, parum concava, ſuperne obſcure plerumque virentia et lævia glabraque, inferne dilutius virentia et glabra, ad margines autem, raris et longis pilis villoſa, denſius autem hirſuta ſunt verſus eorum origines, ſæpe rubentia, apice obtuſiuſcula et ſubtruncata, caulina plana.

FLORES paniculati, panicula diffuſa.

PEDUNCULI inæquales, pauci ſimplices, plures proliferi, dichotomi et trichotomi, demum retro porreĉti, omnes uniflori, floſculis intermediis ſeſſilibus.

CALYX *Gluma* bivalvis, *fig.* 1. *Perianthium* hexaphyllum, foliolis oblongis, acuminatis, carinatis, concavis, ex purpureo fuſcis, perſiſtentibus, *fig.* 2. auĉt.

COROLLA nulla.

STAMINA: FILAMENTA ſex, capillaria, breviſſima, ANTHERÆ oblongæ, ereĉtæ, flavæ, *fig.* 3.

PISTILLUM: GERMEN triquetrum, acuminatum; STYLUS brevis, filiformis; STIGMATA tria, longa, filiformia, villoſa, *fig.* 4.

ROOT perennial, and fibrous, fibres numerous and brown, it is alſo furniſhed with ſhort pointed ſhoots, ſo that it may be called ſomewhat creeping.

STALKS many from the ſame root, about a ſpan in length, ſometimes more, nearly upright, leafy, naked above, ſimple, ſmooth, ſtriated, round, furniſhed with three or four joints, which do not protuberate.

LEAVES next the root numerous, three or four inches long, and three lines or three and a half broad, ſomewhat narroweſt at the baſe, a little concave, above generally of a dull green colour, ſmooth and rather gloſſy, beneath of a paler green, and ſlightly gloſſy, at the edges eſpecially, covered with a few long hairs, which are moſt numerous towards the baſe of the leaf, often of a reddiſh colour, a little blunt and as it were cut off at the point, the ſtalk leaves flat.

FLOWERS forming a ſpreading panicle.

FLOWER-STALKS of unequal lengths, a few of them ſimple, moſt of them proliferous, dichotomous or trichotomous, finally ſtretcht out backward, all of them ſupporting a ſingle flower, the intermediate ones ſeſſile.

CALYX: a *Glume* of two valves, *fig.* 1. a *Perianthium* of ſix leaves, which are oblong, pointed, keel'd, concave, of a purpliſh brown colour and permanent, *fig.* 2. magnified.

COROLLA wanting.

STAMINA: ſix FILAMENTS, capillary and very ſhort; ANTHERÆ oblong, upright, and yellow, *fig.* 3.

PISTILLUM: GERMEN three-cornered, pointed; STYLE ſhort, filiform: STIGMATA three, long, filiform, and villous, *fig.*4.

The *Juncus piloſus, ſylvaticus,* and *campeſtris,* are diſtinguiſhed from the other ſpecies, by their graſs-like hairy leaves; the firſt of theſe has ſome little affinity with the *campeſtris* already figured, but differs from it, not only in its place of growth, but in having its flowers ſtand ſingly, and not in cluſters; while the *campeſtris* delights in expoſed, the *piloſus* is found only in woods, and ſhady ſituations; and from this circumſtance we may perhaps in ſome degree account for its flowering earlier than any of the others, for if the ſeaſon be not very unfavourable, it will begin to flower in February, and is uſually out of bloom the beginning of May.

We know of no uſe to which this ſpecies, or the *ſylvaticus,* is applicable; nor yet from the places they inhabit, can they be conſidered in any degree noxious in Agriculture.

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Juncus pilosus.

Juncus sylvaticus

Juncus Sylvaticus. Great Hairy Wood-Rush.

JUNCUS *Lin. Gen. Pl.* Hexandria Monogynia.

Cal. 6-phyllus. *Cor.* 0. *Capſ.* 1-locularis.

Raii Syn. Gen. 27. Herbæ graminifoliæ flore imperfecto culmiferæ.

JUNCUS *ſylvaticus* foliis planis piloſis, corymbo decompoſito, floribus faſciculatis ſeſſilibus. *Hudſon Fl. Angl. p.* 151.

JUNCUS foliis planis hirſutis, floribus paniculatis, faſciculatis. *Haller hiſt. n.* 1324.

GRAMEN nemoroſum hirſutum latifolium majus. *Scheuch. Agroſt. p.* 317. *C. B. Pin.* 7.

GRAMEN nemoroſum hirſutum latifolium maximum. *Raii Syn. p.* 416. The greateſt broad-leaved hairy Wood-Graſs.

GRAMEN luzulæ maximum. *J. B.* II. 493. *Lightfoot Fl. Scot. p.* 180.

Authors have contributed not a little to miſlead ſtudents, by deſcribing this ſpecies of Juncus, as uncommonly large and ſcarce, and it is probable that Mr. Ray would not have conſidered it as a ſpecies, had he not by accident met with ſome very luxuriant ſpecimens of it; in certain ſituations it doubtleſs may be found very large, and tall, but it more uſually occurs with a ſtalk a little more than a foot high; of ſome plants growing in my garden, cloſe to each other, in a moiſt, but not very ſhady ſituation, the comparative height of the *Juncus campeſtris, piloſus,* and *ſylvaticus,* was as follows, *campeſtris* 9 inches, *piloſus* 11, and *ſylvaticus* 15; the account of its being a ſcarce plant is ſtill more erroneous, as there is hardly a wood in the neighbourhood of London, nor as far as we have obſerved in any part of the kingdom, in which they do not grow plentifully together; they do ſo at leaſt in Biſhop's-Wood, Hampſtead, which is near the ſpot where Mr. Ray deſcribes his plant as growing.

By Linnæus this plant is conſidered as a variety only of the *piloſus:* Mr. Hudson and Baron Haller, examining it with more attention than Linnæus, make a diſtinct ſpecies of it, and give ſuch a deſcription of it as cannot fail to make it known.

To the characters given in their ſynonyms above quoted, we may add that the leaves are not only much broader, and more concave, but more ſharply pointed than thoſe of the *piloſus,* that it flowers three weeks or a month later, and that when the flowering is over, the flower-ſtalks of the *piloſus* are more reflexed or pendulous than thoſe of the *ſylvaticus.*

This ſpecies flowers in May, or earlier if the ſeaſon be a mild one.

Alisma Plantago aquatica

ALISMA PLANTAGO. GREAT WATER-PLANTAIN.

ALISMA *Lin. Gen. Pl.* HEXANDRIA POLYGYNIA.

Cal. 3-phyllus. *Petala* 3. *Sem.* plura.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

ALISMA *Plantago* foliis ovatis acutis, fructibus obtuſe trigonis. *Lin. Syſt. Vegetab. p.* 288. *Spec. Pl. p.* 486. *Fl. Suec. n.* 323.

DAMASONIUM foliis ellipticis, lanceolatis, capitulo rotunde triquetro. *Haller. Hiſt. n.* 1184.

ALISMA *Plantago. Scopoli Fl. Carn. n.* 449.

PLANTAGO aquatica latifolia. *Bauh. Pin.* 190.

PLANTAGO aquatica major. *Ger. emac.* 417. *Park.* 1245. *Raii Syn.* 257. Great Water Plaintain. *Hudſon. Fl. Angl. ed.* 2. *p.* 159. *Lightfoot Fl. Scot. p.* 193.

RADIX perennis, alba, bulbiformis, tunicata, denſiſſimis fibris capillata.	ROOT perennial, white, ſomewhat bulbous, coated, and furniſhed with a tuft of numerous fibres.
FOLIA omnia radicalia, longe petiolata, ovata, acuta, glabra, nervoſa, integerrima, erecta, ſubundulata, petiolis ſemiteretibus, baſi vaginantibus, purpuraſcentibus.	LEAVES all ſpringing from the root, ſtanding on long foot-ſtalks, ovate, pointed, ſmooth, ribbed, perfectly entire, upright, ſlightly waved, the foot-ſtalks ſemicylindrical, at bottom ſheathing and purpliſh.
SCAPUS obtuſe trigonus, nudus, lævis, pedalis ad tripedalem.	STALK obtuſely three-cornered, naked, ſmooth, from one to three feet in height.
RAMI floriferi verticillatim circa ſcapum diſpoſiti, utut ramuli circa ramos, numero quam maxime variantes, nudi.	BRANCHES producing the flowers diſpoſed in whirls round the ſtalk and the leſſer branches in a ſimilar manner round them, varying greatly in number, and naked.
STIPULÆ ad baſin cujuſvis verticilli, membranaceæ, marcidæ, vaginantes.	STIPULÆ at the baſe of each whirl, membranous, withered and ſheathing.
CALYX: PERIANTHIUM triphyllum, foliolis ovatis, acutiuſculis, concavis, lineatis, patentibus, margine membranaceis, *fig.* 1.	CALYX: a PERIANTHIUM of three leaves, the leaves ovate, a little pointed, concave, marked with lines, ſpreading, membranous on the edge, *fig.* 1.
COROLLA: PETALA tria, ſubrotunda, purpurea, eroſa, plana, patentia, remotiuſcula, unguibus flavis, *fig.* 2.	COROLLA three PETALS, roundiſh, purple, gnawed on the edge, flat, ſpreading, ſomewhat remote from each other, claws yellow, *fig.* 2.
STAMINA: FILAMENTA ſex, ſetacea, ſubincurvata. ANTHERÆ vireſcentes, *fig.* 3.	STAMINA: ſix FILAMENTS, fine and tapering, ſlightly bending inwards. ANTHERÆ greeniſh, *fig.* 3.
PISTILLUM: GERMINA plurima, 12 et ultra, in orbem poſita. STYLI tot quot germina, filiformes, erecti. STIGMATA ſimplicia, *fig.* 4. Piſtillum *auct. fig.* 5.	PISTILLUM: GERMINA numerous, to 12 or more placed in a circle. STYLES as numerous as the germina, filiform, upright. STIGMATA ſimple, *fig.* 4. The Piſtillum magnified, *fig.* 5.

The ancient Botaniſts, taken with the firſt appearance of things, and obſerving a ſimilarity in the leaves of this plant to thoſe of Plantain, without conſulting the flower or fruit, made it at once a Plantago, though its fructification bears not the moſt diſtant affinity to that genus.

Baron HALLER obſerves, that in its acrimonious quality it comes near to the Crowfoots, and on the authority of FABREGOU relates, that it has proved fatal to kine and other animals who have eaten it. From theſe effects he very properly queries how comes it to be conſidered by FLOYER as a cooler and aſtringent, and by BOCCONE as uſeful in the Piles.

Externally applied it bliſters; taken internally it produces the ſame effect as the Crowfoots. Cattle are much injured, and ſometimes killed by it. Atrophy and immobility of the hind parts of the body are the effects of which it is productive. LINDENSTOLPIUS, *Brugman's Diſſertatio Quænam ſunt Plantæ inutiles*, &c. 1783.

There is no plant more common than this ſpecies of Water Plantain in and by the ſides of ponds, rivers, &c. It flowers in July, Auguſt, and September.

Alisma Damasonium

[illegible] del. et sculp.

ALISMA DAMASONIUM. STARRY-HEADED WATER-PLANTAIN.

ALISMA *Lin. Gen. Pl.* HEXANDRIA POLYGYNIA.

Cal. 3-phyllus. *Petala* 3. *Sem.* plura.

Raii Syn. Gen. 27. HERBÆ MULTISILIQUÆ SEU CORNICULATÆ.

ALISMA *Damaſonium* foliis cordato oblongis, floribus hexagynis, capſulis ſubulatis. *Lin. Syſt. Vegetab. p.* 350. *Sp. Pl. p.* 486.

PLANTAGO aquatica ſtellata. *Bauh. Pin.* 190.

DAMASONIUM ſtellatum Dalechampii. *I. B.* III. 789.

PLANTAGO aquatica minor ſtellata. *Ger. emac.* 417.

PLANTAGO aquatica minor muricata. *Park.* 1245. *Raii Syn.* Star-headed Water-Plantain. *Hudſ. Fl. Angl. ed.* 2. *p.* 158.

RADIX perennis, fibroſa, fibris plurimis, denſiſſime capillatis, ſimpliciuſculis, ex fuſco-aurantiacis, in limum profunde demiſſis, junioribus albis.	ROOT perennial, fibrous, fibres numerous, thickly matted together, moſtly ſimple, of a browniſh orange colour, ſtriking deeply into the mud, the young ones white.
FOLIA longe petiolata, natantia, cordato-oblonga, integerrima, utrinque glabra, obtuſa, margine ipſa purpuraſcente, ſubtus nervoſa, nervis duobus vix protuberantibus parallelis prope marginem.	LEAVES ſtanding on long footſtalks, ſwimming, of an oblong heart ſhape, perfectly entire, ſmooth on both ſides, obtuſe, the very edge purpliſh, ribb'd on the under ſide, two very ſlightly, prominent, parallel ribs near the margin.
PETIOLI obtuſe trigoni, ſubdiaphani, ſpongioſi, ad baſin lati, et membranâ albidâ utrinque inſtructi.	LEAF-STALKS obtuſely three-cornered, ſomewhat tranſparent, ſpongy, broad at the baſe, and edged on each ſide with a whitiſh membrane.
SCAPUS ſpithamæus, teres, lævis, nudus, craſſiuſculus, ſuperne ſordide purpureus, multiflorus.	STALK about a ſpan long, round, ſmooth, naked, clumſy, of a dirty purple colour above, many-flower'd.
FLORES albi, ſubumbellati.	FLOWERS white, growing umbel-like.
UMBELLÆ plerumque tres, inferior lateralis, octoradiata, proxima ſuperior ſexradiata, ſuprema triradiata, numerus vero variat in diverſis plantis.	UMBELS for the moſt part three, the lowermoſt lateral, eight-rayed, the next above ſix-rayed, the uppermoſt three-rayed, the number however varies in different plants.
INVOLUCRUM umbellæ triphyllum, foliolis ovato-lanceolatis, membranaceis, marceſcentibus.	INVOLUCRUM of the umbel three-leav'd, leaves ovato-lanceolate, membranous, and withering.
PEDUNCULI qui radii umbellæ, teretes, nudi, ſeſquiunciales, ſuperioribus brevioribus.	FLOWER-STALKS which form the rays of the umbel, round, naked, an inch and a half in length, the upper ones ſhorteſt.
CALYX: PERIANTHIUM triphyllum, foliolis ſubovatis, obtuſis, concavis, patentibus, apice membranaceis, cito mareſcentibus, *fig.* 1.	CALYX: a PERIANTHIUM of three leaves, the leaflets nearly ovate, obtuſe, concave, ſpreading, membranous at the top, and ſoon withering, *fig.* 1.
COROLLA: PETALA tria, ſubrotunda, alba, tenera, ungue flavo, *fig.* 2.	COROLLA compoſed of three roundiſh, white, tender PETALS with yellow claws, *fig.* 2.
STAMINA: FILAMENTA ſex, ſubulata, flaveſcentia, corollâ breviora: ANTHERÆ oblongæ, flavæ, *fig.* 3.	STAMINA: ſix tapering yellowiſh FILAMENTS, ſhorter than the corolla: ANTHERÆ oblong and yellow, *fig.* 3.
PISTILLUM: GERMINA plerumque ſex, ſubulata, erecta: STYLI nulli: STIGMATA villoſa, ſubreflexa, *fig.* 4.	PISTILLUM: GERMINA for the moſt part ſix in number, tapering, upright: STYLES none: STIGMATA villous, ſomewhat reflexed, *fig.* 4.
PERICARPIUM: CAPSULÆ ſex, patentes, ſubulatæ, inferne compreſſæ, uniloculares, monoſpermæ vel diſpermæ, *fig.* 5.	SEED-VESSEL: ſix ſpreading CAPSULES, tapering to a point, flattened below, one-cell'd, a ſingle ſeed or two in each, *fig.* 5.
SEMEN oblongum, obtuſum, nigricans, nitidum, ad lentem punctis exaſperatum, ſulco per medium utrinque longitudinali, *fig.* 6.	SEED oblong, obtuſe, blackiſh, ſhining, when magnified appearing rough with little prominent points, a groove running down the middle on each ſide, *fig.* 6.

Not very uncommon in the neighbourhood of London, in ditches, ſtagnant waters, and ponds, eſpecially ſuch as have been formed by the digging of gravel: particularly plentiful in ſuch like ponds on Wandſworth Common, with *Sparganium ſimplex:* alſo, about Clapham, Walworth, &c.

Flowers from June to September.

Is not remarkable for its qualities or uſes.

TOURNEFORT makes a diſtinct genus of the *Damaſonium,* referring the *Aliſma Plantago* and *ranunculoides* to the genus *Ranunculus.*

RAY alſo ſeparates it from the *Plantago aquatica,* but obſerves that it agrees with it in its tripetalous flowers, though it differs in its ſeed-veſſels.

Notwithſtanding this diſcrepance in the ſeed-veſſels, the other parts of its fructification, joined to its general habit, in our humble opinion, fully juſtify LINNÆUS in making it an *Aliſma.*

RUMEX ACETOSELLA. SHEEP'S SORREL.

RUMEX *Lin. Gen. Pl.* HEXANDRIA TRIGYNIA.

Cal. 3-phyllus. *Petala* 3, conniventia. *Sem.* 1. triquetrum.

Raii Syn. Gen. 5. Herbæ flore imperfecto ſeu ſtamineo (vel apetalo potius).

RUMEX *Acetoſella* floribus dioicis foliis lanceolato-haſtatis. *Linn. Syſt. Vegetab. p.* 286. *Sp. Pl.* 481. *Fl. Suec. n.* 319.

LAPATHUM ſexubus ſeparatis, foliis ſagittatis, hamis acutis recurvis. *Haller hiſt.* 1596.

LAPATHUM *Acetoſella. Scopoli Fl. Carn. n.* 439.

ACETOSA arvenſis lanceolata. *Bauhin. Pin. p.* 114.

OXALIS tenuifolia. *Ger. emac.* 397.

ACETOSA minor lanceolata. *Parkinſ.* 744.

LAPATHUM acetoſum repens lanceolatum. *Raii Syn. p.* 143. Sheep's Sorrel. *Hudſon Fl. Angl. p.* 156. *Lightfoot Fl. Scot. p.* 191.

RADIX perennis, ſublignoſa, repens, fuſca.	ROOT perennial, of a brown colour, ſomewhat woody, and creeping.
CAULIS palmaris ad pedalem, erectus, lævis, ſtriatus, ſubanguloſus, ramoſus.	STALK from a hand's breadth to a foot in height, upright, ſmooth, ſtriated, ſomewhat angular, branched.
FOLIA alterna, petiolata, inferiora lanceolato-haſtata, hamis ſæpius recurvis, in umbroſis ſubglauca, in apricis ut ut tota planta ſanguinea, ſuperiora lineari-lanceolata.	LEAVES alternate, ſtanding on foot-ſtalks, the lower ones lanceolate, and halbert-ſhaped, the lobes forming the halbert, uſually bent upwards, in ſhady ſituations ſomewhat glaucous, in expoſed ones of a blood colour, as well as the whole plant, the upper ones entire, betwixt linear and lance-ſhaped.
PETIOLUS longitudine folii, inferne ſtriatus, ſuperne canaliculatus, baſi vaginans, vaginâ apice membranaceâ, albâ, lacerâ, ſæpe reflexâ.	LEAF-STALK the length of the leaf, on the under ſide ſtriated, above ſingle-channeled, forming a ſheath at bottom, the tip of which is membranous, white, torn, and often reflexed.
SPICÆ plurimæ, nudæ, ſubramoſæ, ſæpe nutantes.	SPIKES numerous, naked, ſomewhat branched, and often drooping.
FLORES maſculi et fœminei in diſtinctis plantis, minimi; *fig.* 1, 2. flos maſculus auctus; *fig.* 3. fœmineus; *fig.* 4. ſemen magnitudine naturali; *fig.* 5. idem auct.	FLOWERS male and female in ſeparate plants, very minute; *fig.* 1, 2. a male flower magnified; *fig.* 3. a female flower; *fig.* 4. the ſeed of its natural ſize; *fig.* 5. the ſame magnified.

In repreſenting the two ſexes (which occur in this as well as in the common Sorrel) we have intended that one of them ſhould expreſs the plant in its dwarf ſtate, as it uſually occurs on very dry, hilly paſtures. In ſuch ſituations the whole plant is frequently found of a bright red colour. In more ſhady aſpects it grows taller, and the leaves aſſume a greener hue. Whereever it abounds we may in general look on it as a ſure indication of a dry, barren ſoil. HALLER obſerves, that it is often found growing in Coal-yards *(areis carbonariorum)*.

Agriculturally conſidered, we muſt number it with the weeds, and with thoſe too, from its creeping roots, of difficult extirpation.

It is found in flower from June to September.

Rumex Acetosella

[illegible] et sculp

ERICA VULGARIS. COMMON HEATH.

ERICA *Lin. Gen. Pl.* OCTANDRIA MONOGYNIA.
Cal. 4-phyllus. *Cor.* 4-fida. *Filamenta* receptaculo inſerta. *Antheræ* bifidæ. *Capſ.* 4-locularis.
Raii Syn. ARBORES ET FRUTICES.
ERICA *vulgaris* antheris ariſtatis, corollis campanulatis ſubæqualibus, calycibus duplicatis, foliis oppoſitis ſagittatis. *Lin. Syſt. Vegetab.* p. 301. *Sp. Pl.* p. 501. *Fl. Suec. n.* 336.
ERICA foliis imis adpreſſis ſimplicibus, floralibus calcaratis. *Haller. Hiſt. n.* p. 1012.
ERICA *vulgaris. Scopoli Fl. Carn. n.* 460.
ERICA vulgaris glabra. *Bauh. Pin.* 485.
ERICA vulgaris ſeu pumila. *Ger. emac.* 1380.
ERICA vulgaris. *Parkinſ.* 1480. *Raii Syn.* 470. Common Heath or Ling. *Scot.* Hather. *Hudſon. Fl. Angl. ed.* 2. p. 165. *Lightfoot Fl. Scot.* p. 204.

Fruticulus pedalis, bipedalis et ultra, valde ramoſus, rami ſuberecti, teretes, pubeſcentes, rubicundi.	A ſmall ſhrub, a foot or two in height, or more, very much branched, the branches moſtly upright, round, downy, and reddiſh.
FOLIA oppoſita, circa ramulos in quatuor ſeries imbricata, ſeſſilia, ſagittata.	LEAVES oppoſite, ſeſſile and arrow-ſhaped, placed round the ſmall branches in four rows.
FLORES purpurei, ſpicati, ſubſecundi.	FLOWERS purple, growing in a ſpike, moſtly all one way.
PEDUNCULI breviſſimi, longitudine foliorum.	FLOWER-STALKS very ſhort, the length of the leaves.
CALYX: duplex, perſiſtens, exterior breviſſimus, tetraphyllus, foliolis ovatis, acutis, patentibus, e viridi purpuraſcentibus, ad lentem ciliatis, interior cum corolla concolor, tetraphyllus, foliolis ovato-lanceolatis, nitidis, corolla longioribus, demum inflexis, *fig.* 1, 2.	CALYX: double, and permanent, the outermoſt very ſhort, compoſed of four leaves, which are ovate, pointed, ſpreading, partly green, and partly purple, when magnified hairy on the edges, the inner one the ſame colour as the corolla, compoſed of four ſomewhat lanceolate leaves, ſhining, longer than the corolla, finally bending inward, *fig.* 1, 2.
COROLLA monopetala, purpurea, quadripartita, corollâ brevior, incluſa, *fig.* 3.	COROLLA monopetalous, purple, deeply divided into four ſegments, ſhorter than the corolla, and incloſed within it, *fig.* 3.
STAMINA: FILAMENTA octo, alba. ANTHERÆ ſubcoadunatæ, aurantiacæ, bicornes, *fig.* 4, 5.	STAMINA: eight white FILAMENTS. ANTHERÆ ſomewhat united, orange-coloured, each furniſhed with two little horns, *fig.* 4, 5.
PISTILLUM: GERMEN villoſum. STYLUS calyce longior, ſurſum curvatus. STIGMA quadrifidum, *fig.* 6.	PISTILLUM: GERMEN villous. STYLE longer than the calyx, bent upward. STIGMA quadrifid, *fig.* 6.

There is, perhaps, no tribe of plants whoſe flowers aſſume a greater variety of form than thoſe of the preſent genus. Such as have had opportunities of examining many of the foreign heaths, muſt aſſent to the truth of this obſervation; and ſuch as have not, need only conſult the preſent ſpecies, and compare the diſſections with thoſe of the *Erica cinerea*, and *Tetralix* already figured, to be perfectly convinced of it: ſo great indeed has this difference appeared to ſome botaniſts, that they have divided them into diſtinct genera.

Africa produces more heaths than the whole world beſides. Next to Africa, Europe is the moſt productive; and almoſt every part of this quarter of the globe, eſpecially the northern, abounds with this ſpecies. LINNÆUS remarks, in his *Flora Lapponica*, that, in ſome of the diſtricts through which he paſſed, ſcarce any plant was to be ſeen but the barren heath, which every where covered the ground, and could no ways be extirpated. The country people, he obſerves, had an idea that there were two plants which would finally overſpread and deſtroy the whole earth, *viz.* Heath and Tobacco.

Excluſive of the animation which the bloſſoms of this ſpecies in particular impart to our dreary waſtes at the cloſe of ſummer, it anſwers many important purpoſes in natural as well as rural œconomy.

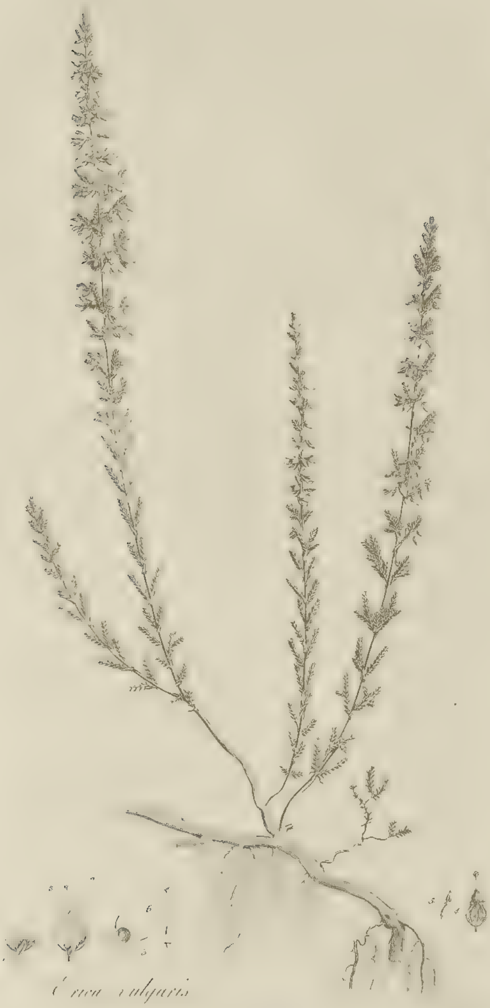
While its branches afford ſhelter to many of the feathered tribe, its ſeeds form a principal part of their food, eſpecially thoſe of the Grous kind: and here we may remark a particular proviſion of nature in forming the ſeed-veſſel, &c. in ſuch a manner as to preſerve the ſeeds a whole year, or longer, whence they have a conſtant ſupply. The foliage of this ſpecies affords nouriſhment to the caterpillar of the *Phalæna quercus Linnæi*, or great Egger Moth: we obſerved many inſtances of this in our northern tour. Bees are well known to collect largely from the bloſſoms of heath; but ſuch honey is browner, coarſer, and of leſs value than ſuch as is collected where no heath grows. According to Linnæus's experiments, no kind of cattle appear to be fond of it. Horſes and Oxen will eat it; Sheep and Goats ſometimes eat, ſometimes reject it. Cattle, not accuſtomed to browſe on heath, give bloody milk; but are ſoon cured, by drinking plentifully of water. *Pennant's Tour*, p. 229.

Heath or Hather is applied to many œconomical purpoſes among the Highlanders: they frequently cover their houſes with it inſtead of thatch, or elſe twiſt it into ropes, and bind down the thatch with them in a kind of lattice-work. In moſt of the weſtern iſles they dye their yarn of a yellow colour, by boiling it in water with the green tops and flowers of this plant. In Rum, Skye, and the Long Iſland, they frequently tan their leather in a ſtrong decoction of it. Formerly the young tops are ſaid to have been uſed alone to brew a kind of ale; and even now, I was informed, that the inhabitants of Iſla and Jura ſtill continue to brew a very potable liquor, by mixing two-thirds of the tops of Hather, and one-third of malt. This is not the only refreſhment that Hather affords; the hardy Highlanders frequently make their beds with it, laying the roots downwards, and the tops upwards, which, though not quite ſo ſoft and luxurious as beds of down, are altogether as refreſhing to thoſe who ſleep on them, and perhaps much more healthy. *Lightfoot Fl. Scot.* p. 205.

In moſt parts of Great Britain, Heath is in general uſe for making brooms; and for this purpoſe is uſually cut when in bloſſom. The turf, with the Heath growing on it, is cut up, dried, and uſed for fuel by the poor cottager. It is alſo in uſe for heating ovens, for mending bad roads where better materials are wanting, and for making drains under-ground.

This ſpecies, as well as the others, is ſometimes found with white bloſſoms, and a variety with hoary leaves is not uncommon, particularly on Bagſhot Heath. Some authors have improperly conſidered this as the *Erica ciliaris* of LINNÆUS.

The Dodder very frequently entwines itſelf about this plant, and gives it an appearance which may puzzle, if not miſlead, the inexperienced botaniſt.



Erica vulgaris

Spergula arvensis

SPERGULA ARVENSIS. CORN SPURREY.

SPERGULA *Linnæi Gen. Pl.* DECANDRIA PENTAGYNIA.
Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.
SPERGULA *arvenſis* foliis verticillatis, floribus decandris. *Linn. Syſt. Vegetab. p.* 363. *Sp. Pl. p.* 630. *Flor. Suec. n.* 419.
ALSINE foliis verticillatis, ſeminibus rotundis. *Haller. hiſt. n.* 873.
ALSINE ſpergula dicta major. *Bauhin. Pin.* 251.
SAGINA Spergula. *Ger. emac.* 1125.
SAGINA Spergula major. *Parkinſ.* 562. *Raii Syn. p.* 351. Spurrey. *Hudſon. Fl. Angl. ed.* 2. *p.* 203. *Lightfoot Fl. Scot. p.* 243.

RADIX annua, fibroſa.

CAULES plures, ſpithamæi, ſeu pedales, ſubereсti, teretes, læves, ſuperne viſcoſi, geniculis globoſis.

STIPULÆ ad genicula binæ, breviſſimæ, apicibus inferiorum reflexis.

FOLIA verticillata, faſciculos duos conſtituentia, foliolis octo circiter in quovis faſciculo, interioribus ſenſim minoribus, linearia, teretia, apicibus flavis, dorſo lineâ exarato, ſuperioribus viſcoſis.

FLORES albi, pulchelli, paniculati, panicula dichotoma.

PEDUNCULI viſcoſi, peractâ floreſcentiâ penduli.

CALYX: PERIANTHIUM pentaphyllum, foliolis ovatis, obtuſiuſculis, concavis, patentibus, perſiſtentibus, marginibus albidis, *fig.* 1.

COROLLA: PETALA quinque, ovata, acutiuſcula, concava, calyce longiora, ungue brevi affixa, *fig.* 2.

STAMINA: FILAMENTA decem, alba, ſubulata; ANTHERÆ ſubrotundæ, flavæ, *fig.* 3.

PISTILLUM: GERMEN ſubrotundum; STYLI quinque, breves, reflexi; STIGMATA ſimplicia, *fig.* 4.

PERICARPIUM: CAPSULA ovata, tecta, unilocularis, quinquevalvis, *fig.* 5.

SEMINA plurima, majuſcula, nigricantia, depreſſo-globoſa, punctis rufis prominulis ad lentem exaſperata, annulo manifeſte cincta, *fig.* 6, 7.

ROOT annual and fibrous.

STALKS numerous, about a ſpan or a foot in length, nearly upright, round, ſmooth, on the upper part clammy, joints globular.

STIPULÆ growing in pairs at the joints, very ſhort, the tips of the lower ones reflexed.

LEAVES growing in whirls, and forming two bundles, about eight in each bundle, the inner ones gradually ſmalleſt, linear, round, tips yellow, with a deep furrow on the back, the upper ones clammy.

FLOWERS white, pretty, growing in a panicle, which is dichotomous.

PEDUNCLES clammy, hanging down when the flowering is over.

CALYX: a PERIANTHIUM of five leaves, the leaves ovate, bluntiſh, concave, ſpreading, permanent, the edges whitiſh, *fig.* 1.

COROLLA: five PETALS, ovate, a little pointed, concave, longer than the calyx, affixed by a ſhort claw, *fig.* 2.

STAMINA: ten FILAMENTS, white, tapering; ANTHERÆ roundiſh and yellow, *fig.* 3.

PISTILLUM: GERMEN roundiſh; STYLES five, ſhort, reflexed; STIGMATA ſimple, *fig.* 4.

SEED-VESSEL: an ovate CAPSULE covered, by the remaining calyx, of one cavity and five valves, *fig.* 5.

SEEDS numerous, rather large, blackiſh, round, with a ſmall degree of flatneſs, if viewed with a magnifier beſet with ſmall, reddiſh, prominent points, and encircled with a manifeſt ring, *fig.* 6, 7.

The *Spergula arvenſis* is ſeldom found but in a ſandy ſoil; and as that kind of ſoil does not abound much in the neighbourhood of London, ſo this ſpecies of Spergula may be conſidered as one of our plantæ rariores. On ſome parts of Hampſtead-Heath, and in the neighbourhood of the Spaniard, we have often noticed it, as well as in the ſand-pits at Charlton. In ſome ſandy fields near Carſhalton, in Surrey, we have ſeen it ſo plentiful as to appear like the intended crop. As no uſe is made of it with us, it may be conſidered as one of the worſt weeds to which a ſandy ſoil is ſubject. Abroad, however, it is an object of cultivation. In ſome parts of Flanders, Germany, and Norway, they feed their cattle with the plant, and their poultry with its ſeeds; but as Tares and Back-wheat, which are far more productive, as well as nutritious, may be cultivated in a ſimilar ſoil, our Farmers do wiſely in rejecting it.

It is found in bloſſom from July to September.

We have not found this plant unuſually ſubject to vary in the number of its ſtamina; nor have we obſerved it to vary ſo much in any other reſpect as to make us ſuſpect we had ſeen the *Spergula pentandra* of LINNÆUS, which Mr. HUDSON makes a variety of the *arvenſis*, contrary to the opinion of ſome of the greateſt authorities. If the difference betwixt theſe two plants was to depend ſolely on the number of its ſtamina, we ſhould be extremely ready to conſider them as the ſame; but RAY, whoſe opinion muſt be allowed to have great weight, deſcribes the *pentandra* as a ſpecies totally diſtinct from the *arvenſis*. He does not found his ſpecific difference on the number of its ſtamina; but on characters, leſs ſubject to variation: the leaves at the joints, he obſerves, are fewer and thicker, the plant flowers early, and ſoon goes off (neither of which takes place in the *arvenſis*); and adds, that Dr. SHERHARD obſerved it in ſandy places in Ireland.

To ſhew that other Authors have likewiſe entertained an opinion of its being a diſtinct ſpecies, we ſhall quote their reſpective ſynonyms.

Spergula foliis filiformibus verticillatis *raris* ſeminibus nigris. *Sauv. Monſp.* 167.
Alſine ſpergulæ facie *minima* ſeminibus emarginatis. *Tourn. inſt.* 244. *Vaill. Paris* 8.
Alſine ſpergulæ facie minima. *Magn. Monſp.* 14.
Arenaria teretifolia *verna*, flore albo, ſemine limbo foliaceo cincto. *Rupp. Jen.* 101.
Spergula annua, ſemine *foliaceo* nigro circulo membranaceo albo cincto. *Moris hiſt.* 2. *p.* 551. *blæſ.* 28. *Dill Giſs* 46. *E. N. C. cent.* 5 *p.* 275. *t.* 4.

On theſe ſeveral authorities we cannot but conclude, that there exiſts ſuch a plant as the *Pentandra*; nor can we avoid expreſſing a wiſh, that ſome gentleman, whoſe reſidence may afford him an opportunity of obſerving its hiſtory, will favour us with a more complete account of it.

Agrimonia Eupatoria

AGRIMONIA EUPATORIA. AGRIMONY.

AGRIMONIA *Lin. Gen. Pl.* DODECANDRIA DIGYNIA.

Cal. 5 dentatus, altero obvallatus. *Petala* 5. *Sem.* 2, in fundo calycis.

Raii Syn. Gen. 10. HERBÆ FLORE PERFECTO SIMPLICI SEMINIBUS NUDIS SOLITARIIS SEU AD SINGULOS FLORES SINGULIS.

AGRIMONIA *Eupatoria* foliis caulinis pinnatis: impari petiolato, fructibus hiſpidis. *Lin. Syſt. Veg. p.* 372. *Sp. Pl. p.* 643. *Fl. Succ. n.* 423.

AGRIMONIA foliis pinnatis, pinnulis alterne minimis. *Haller Hiſt.* 991.

AGRIMONIA *Eupatoria. Scopoli Fl. Carn. n.* 567.

EUPATORIUM veterum ſeu Agrimonia. *Bauh. Pin.* 321.

AGRIMONIA *Ger. emac.* 712.

AGRIMONIA vulgaris. *Park.* 594. *Raii Syn. p.* 202. Agrimony. *Hudſon. Fl. Angl. ed.* 2. *p.* 206. *Lightfoot Fl. Scot. p.* 247.

RADIX perennis, ramoſa, rubeſcens, ſquamis nigricantibus obſeſſa.	ROOT perennial, branched, of a reddiſh colour, beſet with blackiſh ſcales.
CAULIS pedalis ad tripedalem, erectus, teres, obſolete anguloſus, hirſutus, rubicundus aut rubro punctatus, ſimplex vel ramoſus.	STALK from one to three feet high, upright, round, faintly angular, hirſute, reddiſh or dotted with red, ſingle or branched.
FOLIA alterna, ſubambroſiaca, hirſuta, interrupte pinnata cum impari, 5 vel 6 juga, pinnæ ſubоppoſitæ, ſeſſiles, ſubovatæ, venoſæ, ſerratæ, ciliatæ, pinnulæ plerumque integræ aut trifidæ.	LEAVES alternate, ſomewhat fragrant, hirſute, interruptedly pinnated with an odd one at the end, compoſed of five or ſix pair of pinnæ, pinnæ moſtly oppoſite, ſeſſile, ſomewhat ovate, veiny, ſerrated, edged with hairs, the ſmall pinnæ for the moſt part entire or trifid.
STIPULÆ duæ, oppoſitæ, majuſculæ, amplexicaules, patentes, profunde ſerratæ.	STIPULÆ two, oppoſite, rather large, embracing the ſtalk, ſpreading, and deeply ſerrated.
BRACTEÆ trifidæ, laciniis linearibus, hirſutis.	FLORAL-LEAVES trifid, the ſegments linear and hirſute.
SPICA terminalis, elongata, hirſuta, floribus breviter pedicellatis.	SPIKE terminal, elongated, hirſute, the flowers ſtanding on very ſhort foot-ſtalks.
CALYX: PERIANTHIUM monophyllum, quinquefidum, ſuperum, perſiſtens, laciniis ovatis, acutis, *fig.* 1. extra ſetis filiformibus, rigidis, apice purpureis, uncinatis, cinctum, *fig.* 2. intus ſubſtantia flava glanduloſa clauſum; *Involucrum* ad baſin germinis diphyllum foliolis binis ſeu tridentatis, *fig.* 3.	CALYX: a PERIANTHIUM of one leaf, divided into five ſegments, placed above the germen, and permanent, the ſegments ovate, pointed, *fig.* 1. externally ſurrounded with rigid, filiform, hooked, briſtles, purple at the points, *fig.* 2. within cloſed with a yellow glandular ſubſtance; *Involucrum* at the baſe of the germen, compoſed of two leaves, each of which has two or three teeth, *fig.* 3.
COROLLA: PETALA quinque, ſubovata, flava, patentia, ſeſſilia, ſubſtantiâ glanduloſâ calycis inſerta, *fig.* 4.	COROLLA: five PETALS, ſomewhat ovate, yellow, ſpreading, ſeſſile, inſerted into the glandular ſubſtance of the calyx, *fig.* 4.
STAMINA: FILAMENTA undecim, ſeu duodecim, luteſcentia, curvata, cum petalis inſerta. ANTHERÆ didymæ, compreſſæ, *fig.* 5.	STAMINA: eleven or twelve FILAMENTS, of a yellowiſh colour, bent and inſerted with the petals. ANTHERÆ compoſed of two lobes and flattened, *fig.* 5.
PISTILLUM: GERMEN inferum, *fig.* 6. STYLI duo, curvati, longitudine ſtaminum. STIGMATA obtuſa, *fig.* 7.	PISTILLUM: GERMEN beneath the calyx, *fig.* 6. STYLES two, bent, the length of the ſtamina. STIGMATA blunt, *fig.* 7.
PERICARPIUM: CAPSULA e calyce orta, nutans, extra ſulcatum, ſuperne cincta ariſtis uncinatis, unilocularis, *fig.* 8.	SEED-VESSEL a CAPSULE, ariſing from the calyx, drooping, grooved on the outſide, on the upper part ſurrounded with hooked beards, of one cavity, *fig.* 8.
SEMINA duo, ſubrotunda, glabra, *fig.* 9.	SEEDS two, roundiſh and ſmooth, *fig.* 9.

Agrimony is a plant of very general growth, being found not only in Europe, but in Virginia and Japan.

It has been chiefly regarded as a medicinal plant, and as ſuch is often raiſed in gardens. Culture does not ſeem to produce any material change in its quality. Another ſpecies or variety, of foreign original, common alſo in our gardens, and differing little in appearance from our indigenous Agrimony, promiſes to be ſuperior to it in virtue, as its taſte is more aromatic, and its ſmell much ſtronger, and very agreeable. CASPAR BAUHINE calls it *Eupatorium odoratum.* FABIUS COLUMNA *Eupatorium Dioſcoridis odoratum et aromaticum. Lewis Diſp. ed. Aik. p.* 29.

The leaves of Agrimony have a ſlightly bitteriſh, roughiſh taſte, accompanied with an agreeable, though very weak, aromatic flavour. The flowers are in ſmell ſtronger, and more agreeable, than the leaves, and in taſte ſomewhat weaker. They readily give out their virtues both to water and rectified ſpirit. The leaves impart to the former a greeniſh yellow, to the latter a deep green colour: the flowers yield their own deep yellow tincture to both menſtrua. *Id.*

Agrimony is one of the milder corroborants; and in this intention is ſometimes employed, eſpecially among the common people, againſt habitual diarrhœas, and cachectic and other indiſpoſitions, from a lax ſtate of the ſolids. Infuſions of the leaves, which are not ungrateful, may be drank as tea. It is ſometimes joined with other ingredients in diet drinks for purifying the blood, and in pectoral Apozems. *Id.*

This plant delights in a dry ſoil, and grows almoſt every where, in this kingdom, in open paſtures, in the borders of fields, and by the ſides of hedges and ditches, flowering from July to September.

Cattle in general diſlike and leave it untouched.

SPIRÆA ULMARIA. MEADOW-SWEET.

SPIRÆA *Lin. Gen. Pl.* ICOSANDRIA PENTAGYNIA.

Cal. 5-fidus. *Petala* 5. *Capſ.* polyſpermæ.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

SPIRÆA *Ulmaria* foliis pinnatis: impari majore lobato, floribus cymoſis. *Lin. Syſt. Vegetab. p.* 393. *Sp. Pl. p.* 702. *Fl. Suec. n.* 440.

FILIPENDULA foliis pinnatis, acute ſerratis, minimis intermiſtis, extrema trilobata maxima. *Haller. hiſt. n.* 1135.

SPIRÆA *Ulmaria Scopoli Fl. Carn. n.* 603.

BARBA CAPRI floribus compactis. *Bauh. Pin.* 164.

ULMARIA *I. B.* III. 488.

REGINA PRATI *Ger. emac. p.* 1043.

ULMARIA vulgaris. *Parkinſ.* 592. *Raii Syn. p.* 259. Meadow-Sweet. *Hudſon Fl. Angl. ed.* 2. *p.* 217. *Lightfoot Fl. Scot. p.* 259.

RADIX perennis, craſſitie minimi digiti, obliqua, rubicunda, fibris plurimis ex fuſco luteſcentibus deſcendentibus inſtructa.	ROOT perennial, the thickneſs of the little finger, oblique, reddiſh, furniſhed with numerous fibres of a browniſh yellow colour, running deep into the earth.
CAULIS bi ſeu tripedalis et ultra, erectus, folioſus, angulatus, glaber, hinc inde rubicundus, plerumque ſimplex.	STALK from two to three feet high or more, upright, leafy, angular, ſmooth, here and there of a reddiſh colour, for the moſt part unbranched.
FOLIA alterna, petiolata, pinnata, 3-vel 5-juga: foliolis oppoſitis, ſeſſilibus, ovato-oblongis, ſupra viridibus, glabris, lucidiuſculis, lineatis, minutim venuloſis, rugoſis, ſubtus nervoſis, minutim tomentoſis, cinereis, margine inciſo-dentatis, undique ſerratis, minutim ciliatis; terminatis foliolo majore, trifido-palmato.	LEAVES alternate, ſtanding on foot-ſtalks, pinnated, pinnæ from three to five pair, oppoſite, ſeſſile, ovato-oblong, above green, ſmooth and ſomewhat ſhining, minutely veined, and wrinkled, the veins impreſſed, beneath ribbed, covered with an aſh-coloured downy ſubſtance, the edge jagged, ſerrated, and finely edged with hairs, the terminal pinna large and deeply divided into three ſegments.
PETIOLI ſubtus convexi, ſupra concavi; radicales triplo longiores.	LEAF-STALKS convex beneath, concave above, thoſe of the radical leaves three times as long as the others.
STIPULÆ amplexicaules, acutæ, margine undique ſerratæ, minutim ciliatæ; *partiales* in petiolo communi intra ſingulum par pinnarum, ſub oppoſitæ, parvæ, inequales magnitudine, ovatæ, dentato-ſerratæ, pariter ſubtus tomentoſæ.	STIPULÆ ſtem-claſping, pointed, ſerrated, and finely edged with hairs, the *partial* ones on the common foot-ſtalk betwixt each pair of pinnæ, nearly oppoſite, ſmall, unequal in ſize, ovate, indented or ſerrated, and like the pinnæ downy underneath.
CORYMBUS terminalis, erectus, minutim pubeſcens, pedunculatus, nudus, compoſitus e cymis plurimis inæqualibus, intermedia ſeſſili.	CORYMBUS terminal, upright, ſlightly pubeſcent, ſtalked, naked, compoſed of ſeveral unequal cymæ, the intermediate one ſeſſile.
CALYX: PERIANTHIUM monophyllum, ſubcampanulatum, ad lentem pubeſcens, pallidum, quinquefidum, laciniis ovatis, acutis, demum reflexis, *fig.* 1.	CALYX: a PERIANTHIUM of one leaf, ſomewhat bell-ſhaped, if magnified ſlightly downy, of a pale colour, divided into five ſegments, which are ovate, pointed, and finally reflexed, *fig.* 1.
COROLLA: PETALA quinque, albida, oblongo-rotundata, unguiculata, patentia, calyce duplo longiora, *fig.* 2.	COROLLA: five whitiſh PETALS, oblong, roundiſh, clawed, ſpreading twice the length of the calyx, *fig.* 2.
STAMINA: FILAMENTA viginti plura, filiformia, flaveſcentia, longitudine corollæ, calyci inſerta. ANTHERÆ ſubrotundæ, flaveſcentes, *fig.* 3.	STAMINA: twenty FILAMENTS or more, filiform, yellowiſh, the length of the corolla, inſerted into the calyx. ANTHERÆ nearly round, and yellowiſh, *fig.* 3.
PISTILLUM: GERMINA quinque, ſex, ſive plura; STYLI totidem, ſuperne incraſſati, reflexa; STIGMATA capitata, *fig.* 4.	PISTILLUM: GERMINA five, ſix, or more; STYLES as many, thickened above and turned back; STIGMATA forming little heads, *fig.* 4.
PERICARPIUM: CAPSULÆ plurimæ, ſpiraliter contortæ, *fig.* 5.	SEED-VESSEL: CAPSULES ſeveral, twiſted together ſpirally, *fig.* 5.

The Meadow-Sweet has been juſtly celebrated for its fragrance and beauty, the agreeable odour which the whole plant, but more particularly the flowers, diffuſe, has recommended it for the purpoſe of ſcenting rooms, and purifying the air, by ſtrewing it on the floors; it is ſaid not to affect the head like other perfumes: the leaves alſo, like thoſe of Burnet, impart an agreeable flavour to wine and other liquors.

As an ornamental plant, it has long held a place in our gardens, not only in its wild ſtate, but with variegated leaves and double flowers.

It puts in its claim alſo for medicinal virtues, which, however, do not appear to be of the moſt powerful kind; the leaves are recommended as mildly aſtringent, and uſeful in Dyſenteries; the flowers are ſaid to be antiſpaſmodic and diuretic: their pleaſant ſmell, in which their virtue reſides, is ſoon diſſipated by keeping.

It grows plentifully in wet meadows and by the ſides of ponds and ditches, flowering from July to September.

Horſes and kine are ſaid to refuſe it, ſheep to eat it, and goats to be particularly fond of it; as it forms a great part of the paſturage in ſome meadows, it is of conſequence for the huſbandman more clearly to aſcertain whether horſes and cows refuſe the young foliage, and whether they reject the whole plant when made into hay.

We have frequently obſerved ſmall red tubercles on the leaves, which we have ſuppoſed to be occaſioned by ſome ſpecies of Cynips.

Spiræa Ulmaria

ROSA CANINA. DOG ROSE.

ROSA *Lin. Gen. Pl.* Icosandria Polygynia.

Cal. urceolatus, quinquefidus, carnoſus, collo coarctatus. *Petala* 5. *Sem.* plurima, hiſpida, calycis interiori lateri affixa.

Raii Syn. Arbores et Frutices

ROSA *canina* germinibus ovatis, pedunculiſque glabris, caule petioliſque aculeatis. *Lin Syſt. Vegetab.* p. 394. *Sp. Pl.* p. 704. *Fl. Suec.* n. 441.

ROSA ſpinis aduncis, foliis ſeptenis, calycibus tomentoſis, ſegmentis pinnatis et ſemipinnatis, tubis breviſſimis. *Haller. Hiſt.* n. 1101.

ROSA *canina*. *Scopoli Fl. Carn.* n. 604.

ROSA ſylveſtris vulgaris flore odorato incarnato. *Bauh. Pin.* p. 483.

ROSA ſylveſtris inodora ſ. canina. *Park.* p. 1017. ſylveſtris alba cum rubore folio glabro. *I. B.* II. p. 43. *Raii Syn.* p. 454. Cynoſbatos et Cynorrhodon Officinarum. The common wild Briar or Dog's Roſe, the Hep-tree. *Hudſon. Fl. Angl.* ed. 2. p. 220. *Lightfoot Fl. Scot.* p. 262.

FRUTEX ſepedalis et ultra, aculeatus, ſcandens, ſerpenſve.	A SHRUB ſix feet or more in height, prickly, climbing or creeping.
CAULIS teres, viridis, ſeu purpureus, ramoſus, aculeatus, aculei validi, recurvi, juniores ruberrimi, ſeneſcentes cinerei.	STALK round, green, or purple, branched and prickly, prickles ſtrong, crooked back, the young ones bright red, the old ones aſh-coloured.
FOLIA alterna, pinnata, plerumque ſeptena, inodora, foliolis ſeſſilibus, ovatis, acutis, ſerratis, ſuperne nitidis, inferne pallidioribus, inferioribus ſenſim minoribus, nervo medio ſubtus aculeato.	LEAVES alternate, pinnated, conſiſting for the moſt part of ſeven folioli, which are ſcentleſs, ovate, pointed, ſerrated, the upper ſide ſhining, the lower ſide paler, the lowermoſt ones gradually ſmalleſt, the mid-rib prickly underneath.
STIPULÆ denticulatæ, denticulis apice rubris, capitatis.	STIPULÆ finely toothed, the teeth tipped with red, and terminated by a globule.
FLORES terminales, bini ſeu terni, etiam ſeni, pedunculati, pedunculis teretibus, nudis.	FLOWERS terminal, growing two or three, even ſometimes ſix together, ſtanding on footſtalks, which are round and naked.
CALYX: calycis foliola lanceolata, longe caudata, duo ſimplicia, duo utrinque pinnata, pinnis lateſcentibus, acutis, unum ab altero tantum latere pinnatum, *fig.* 1.	CALYX: the folioli lanceolate, and long-tailed, two of them ſimple, two pinnated on each ſide, the pinnæ broadiſh and pointed, and one pinnated only on one ſide, *fig.* 1.
COROLLA: Petala quinque, obcordata, remotiuſcula, carnea, ad baſin pallidiora.	COROLLA: five Petals inverſely cordate, a little remote from each other, pale red, fainteſt towards the baſe.
STAMINA: Filamenta plurima, lutea, ſetacea. Antheræ incumbentes, ovatæ, *fig.* 2.	STAMINA: Filaments numerous, yellow, tapering. Antheræ incumbent, and ovate, *fig.* 2.
PISTILLUM: Germina plurima, intra tubum calycis, *fig.* 3. oblonga, lanata. Styli filiformes. Stigmata plurima, arcte conniventia in capitulum, *fig.* 3.	PISTILLUM: Germina numerous, within the tube of the calyx, *fig.* 3. oblong and woolly. Styles filiform. Stigmata numerous, cloſely uniting and forming a little head, *fig.* 3.
PERICARPIUM: Bacca ovalis, nitida, coccinea, unilocularis.	SEED-VESSEL: an oval, ſhining, ſcarlet Berry of one cavity.
SEMINA plurima, luteſcentia, ſubovata, lanata, apice barbata.	SEEDS numerous, yellowiſh, ſomewhat ovate, woolly, bearded at top.

We remember ſomewhere to have ſeen an attempt to verſify the Genera Plantarum: ſhould ſuch a plan ever be ſeriouſly agitated, we might recommend the following lines, written perhaps before any true notion was entertained of genus or ſpecies, as expreſſive of the Roſe:

"Quinque ſumus fratres, ſub eodem tempore nati,
"Bini barbati, bini ſine crine creati,
"Quintus habet barbam, ſed tantum dimidiatam."

On examination it will appear, that this deſcription, however quaint, accords exactly with the calyx in moſt, if not all, the ſpecies of this genus.

In ſome parts of Europe, particularly Auſtria and Carniola, the Roſes are much more numerous than with us; and appear to create difficulties in determining the ſpecies to which we are happily ſtrangers. Scopoli thus exclaims: "*Fungum* et *Roſam* quiſque noſcit, ſpecies vero genuinas utriuſque generis ne Botanici quidem conſum-"mati." The preſent ſpecies, without ſome little attention, may however be miſtaken for the *alba*, eſpecially when its flowers are whiter than ordinary.

The Dog Roſe is well known to produce the Hep, a fruit agreeable enough when ripe and mellowed by the froſt. Of theſe a conſerve is made, and kept in the ſhops, where it is more uſed as a vehicle for other medicines than for any virtue of its own.

A very ſingular moſſy protuberance is often found on various parts of this Roſe, which is occaſioned by an inſect, the *Cynips Roſæ* of Linnæus. Formerly this ſubſtance, under the name *Bedeguar*, was uſed medicinally; but is now with much propriety rejected.

Its lively bloſſoms decorate our hedges in the month of July. The fruit is late before it ripens. In the winter it is much ſought after by many birds, eſpecially the Pheaſant.

The water diſtilled from the wild Roſe is ſaid to be infinitely more fragrant than the common Roſe water. Haller ſays of it, "Fragrantia ejus olei omnia alia odoramenta ſuperat, ut inter regia dona ſit."

The ſtrong thorns with which this ſhrub is furniſhed make it valuable either for forming hedges of itſelf, or for planting with others of ſtronger growth. The beſt way of raiſing plants for this purpoſe will be from ſeeds.

Rosa canina

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Tormentilla officinalis

TORMENTILLA OFFICINALIS. TORMENTIL.

TORMENTILLA *Lin. Gen. Pl.* ICOSANDRIA POLYGYNIA.
Cal. 8-fidus. *Petala* 4. *Sem.* ſubrotunda, nuda, receptaculo parvo exſucco affixa.
Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.
TORMENTILLA *officinalis.*
TORMENTILLA *erecta* caule erectiuſculo, foliis ſeſſilibus. *Lin. Syſt. Vegetab. p.* 399. *Sp. Pl. p.* 716. *Fl. Suec. n.* 459.
FRAGRARIA tetrapetala, foliis caulinis ſeſſilibus, quinatis. *Haller. hiſt. n.* 1117.
POTENTILLA *Tormentilla erecta. Scopoli Fl. Carn. n.* 620.
TORMENTILLA ſylveſtris. *Bauh. Pin.* 326.
TORMENTILLA *Ger. emac.* 992. vulgaris *Parkinſ.* 394.
Raii Syn. p. 257. Tormentil, Septfoil. *Hudſon Fl. Angl. ed.* 2. *p.* 225. *Lightfoot Fl. Scot. p.* 272.

RADIX craſſa, tuberoſa, variæ magnitudinis et formæ, extus fuſca, intus rubicunda.	ROOT thick, and tuberous, various both in ſize and ſhape, externally brown, internally red.
CAULES plures ex una radice, ſpithamæi et ultra, procumbentes, teretes, filiformes, piloſi, inferne ſimplices, et ſæpe nudi, ſuperne ramoſi.	STALKS ſeveral from one root, a ſpan or more in length, procumbent, round, filiform, hairy, below ſimple and often naked, above branched.
FOLIA alterna, ſeſſilia, amplexicauli-perfoliata, multifida, utrinque parce pubeſcentia, ſupra ſaturate viridia, laciniis obverſe lanceolatis, obtuſis, ſuperne latioribus, inciſis, patentibus, tribus exterioribus duplo longioribus.	LEAVES alternate, ſeſſile, nearly perfoliate, on each ſide ſlightly pubeſcent, above of a deep green colour, divided into many ſegments, the ſegments inverſely lanceolate, obtuſe, broadeſt above, ſerrated on the edges, and ſpreading, the three outermoſt twice as long as the others.
PEDUNCULI axillares, filiformes, elongati, uniflori, nudi, piloſi.	FLOWER-STALKS axillary, filiform, long, ſupporting one flower, naked, and hairy.
FLORES primo cernui, poſtea erecti.	FLOWERS at firſt drooping, afterwards upright.
CALYX: PERIANTHIUM monophyllum, octopartitum, pubeſcens, laciniis ovatis, acutis, patentibus, alternis minoribus, *fig.* 1.	CALYX: a PERIANTHIUM of one leaf, deeply divided into eight ſegments, downy, the ſegments ovate, pointed, alternately leaſt, *fig.* 1.
COROLLA: PETALA quatuor, lutea, obcordata, plana, patentia, unguibus calyci inſerta, *fig.* 2.	COROLLA: four PETALS, of a yellow colour, inverſely heart-ſhaped, flat, ſpreading, inſerted by the claws into the calyx, *fig.* 2.
STAMINA: FILAMENTA ſedecim circiter, calyci inſerta, corolla breviora; ANTHERÆ ſimplices, luteæ, *fig.* 3.	STAMINA: about ſixteen FILAMENTS, inſerted into the calyx, ſhorter than the corolla; ANTHERÆ ſimple and yellow, *fig.* 3.
PISTILLUM: GERMINA octo circiter, glabra, ſubrotunda, in capitulum conniventia, *fig.* 4. STYLI filiformes, longitudine ſtaminum, lateri germinis inſerti; STIGMATA obtuſa, *fig.* 5. auct.	PISTILLUM: GERMINA about eight, ſmooth, roundiſh, forming a little head, *fig.* 4. STYLES filiform, the length of the ſtamina, inſerted into the ſide of the germen; STIGMA blunt, *fig.* 5. magnified.
RECEPTACULUM villoſum.	RECEPTACLE villous.
SEMINA tot quot germina, oblongiuſcula, obtuſa, glabra, nuda, luteſcentia, *fig.* 6.	SEEDS as numerous as the germina, rather oblong, obtuſe, ſmooth, naked, and yellowiſh, *fig.* 6.

Tormentil is a plant of conſiderable importance in rural œconomy and medicine.

The roots are uſed in moſt of the Weſtern Iſles, and in the *Orkneys*, for tanning of leather; in which intention they are proved, by ſome late experiments, to be ſuperior even to the oak-bark. They are firſt of all boiled in water, and the leather afterwards ſteeped in the cold liquor. In the iſlands of *Tirey* and *Col* the inhabitants have deſtroyed ſo much ground by digging them up, that they have lately been prohibited the uſe of them. *Lightfoot Fl. Scot. p.* 272.

Conſidered medicinally, Tormentil root is a ſtrong and almoſt flavourleſs aſtringent, and gives out its aſtringency both to water and rectified ſpirit, moſt perfectly to the latter: the watery decoction, of a tranſparent browniſh-red colour whilſt hot, becomes turbid in cooling like that of the Peruvian bark, and depoſits a portion of reſinous matter: the ſpirituous tincture, of a brighter reddiſh colour, retains its pellucidity. The extracts obtained by inſpiſſation, are intenſely ſtyptic, the ſpirituous moſt ſo. It is generally given in decoction: an ounce and a half of the powdered root may be boiled in three pints of water to a quart, adding, towards the end of the boiling, a drachm of cinnamon: of the ſtrained liquor, ſweetened with an ounce of any agreeable ſyrup, two ounces or more may be taken four or five times a day.

We are by no means fond of changing the Linnæan names, but on the preſent occaſion we are, in ſome degree, compelled to it, from the great inconvenience we have experienced in calling a plant *erecta*, which with us is always procumbent, unleſs drawn up by ſurrounding herbage, or by growing in woods, where it more rarely occurs.

Its moſt uſual place of growth is on heaths, moors, and mountainous paſtures, where it is extremely common, and flowers from June to September.

LINNÆUS appears to have been induced to call this plant *erecta*, by way of contraſt to the *Tormentilla reptans*, which he enumerates as a ſpecies: ſuch a plant is certainly figured and deſcribed by ſeveral Engliſh Botaniſts, but we never yet ſaw any ſpecies of Tormentil with a creeping ſtalk; we have obſerved the common Tormentil vary much in ſize, in the length of its branches, and in the number and ſize of its petals, we have noticed the leaves ſometimes to have foot-ſtalks, and we have for ſeveral years cultivated a *large variety* of this plant, which from one root has extended its ſtalks nearly a yard every way, and though they have lain cloſe to the ground, on a moiſt ſoil, we never could perceive the leaſt tendency in them to throw out roots at the joints; hence we are induced to conclude, that no other than one *ſpecies* of Tormentil exiſts.

As the Tormentil varies with five petals, ſo the *Potentilla reptans* has ſometimes only four, and, perhaps, a ſtarved ſpecimen of the latter, originally gave riſe to the *Tormentilla reptans.*

This occaſional variation in the number of the petals, &c. at once deſtroys the generic character of the Tormentil; for, add one-fifth part more of the fructification to thoſe which already exiſt in the Tormentilla, and you make a Potentilla of it; or, *vice verſâ*, take one fifth-part of the fructification from a Potentilla, and it becomes a Tormentilla; they ought ſurely then to form but one genus: SCOPOLI unites them, facetiouſly remarking, *Monoculum Hominem ab humano genere quis ſeparabit:* HALLER joins the *Potentilla, Tormentilla, Fragraria*, and *Sibbaldia*, in one family.

CISTUS HELIANTHEMUM. DWARF CISTUS.

CISTUS *Lin. Gen. Pl.* POLYANDRIA MONOGYNIA.

Cor. 5-petala. *Cal.* 5-phyllus; foliolis duobus minoribus. *Capſula.*

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

CISTUS *Helianthemum* ſuffruticoſus procumbens, ſtipulis lanceolatis, foliis oblongis revolutis ſubpiloſis. *Lin. Syſt. Vegetab. Sp. Pl.* 744. *Fl. Suec.* n. 472.

CISTUS foliis conjugatis, ellipticis, hirſutis, integerrimis, petiolis unifloris, ſubhirſutis. *Hall. Hiſt.* 1033.

CISTUS *Helianthemum. Scopoli Fl. Carn.* n. 649.

CHAMÆ CISTUS vulgaris flore luteo. *Bauh.* p. 465.

HELIANTHEMUM Anglicum luteum. *Ger. em.* 1282.

HELIANTHEMUM vulgare. *Parkins.* 656. *Raii Syn.* p. 341. Dwarf Ciſtus, or little Sun-Flower. *Hudſon Fl. Angl.* ed. 2. p. 233. *Lightfoot Fl. Scot.* p. 281. *Oeder Fl. Dan.* 101.

RADIX perennis, ſublignoſa, fuſca.	ROOT perennial, ſomewhat woody and brown.
CAULES plurimi, ſuffruticoſi, procumbentes, teretes, inferne glabri, ſuperne hirſutuli, ſæpius rubicundi.	STALKS numerous, ſomewhat ſhrubby, procumbent, round, below ſmooth, above ſlightly hairy, moſt commonly reddiſh.
FOLIA oppoſita, breviſſime petiolata, oblongo-ovata, acutiuſcula, marginibus ſubrevolutis, ſuperne ſaturate viridia, ſcabriuſcula, ſubpiloſa, pilis furcatis, inferne ſubtomentoſa, *fig.* 1.	LEAVES oppoſite, ſtanding on very ſhort foot-ſtalks, of an oblong ovate ſhape, ſomewhat pointed, the edges ſlightly rolled back, on the upper ſide of a deep green colour, roughiſh, and ſomewhat hairy, the hairs forked, on the under ſide a little downy, *fig.* 1.
STIPULÆ quaternæ, lanceolatæ, piloſæ.	STIPULÆ growing four together, lanceolate, and hairy.
CALYX: PERIANTHIUM pentaphyllum, perſiſtens, foliolis tribus ſuperioribus ovatis, obtuſiuſculis, membranaceis, ſubdiaphanis, æqualibus, concavis, trinervibus, nervis coloratis, hirſutulis, duobus inferioribus minimis, lateralibus hirſutis, *fig.* 2, 3.	CALYX: a PERIANTHIUM of five leaves and permanent, the three uppermoſt ones ovate, bluntiſh, membranous, ſomewhat tranſparent, equal, concave, three-ribbed, the ribs coloured and hairy, the two lowermoſt very ſmall, lateral, and hairy, *fig.* 2, 3.
COROLLA; PETALA quinque obcordata, flava, margine exteriore crenulata, *fig.* 4.	COROLLA: five PETALS inverſely heart-ſhaped, of a yellow colour, the outer edge ſlightly notched, *fig.* 4.
STAMINA: FILAMENTA numeroſa, capillaria, flava, receptaculo ſupra calycem inſerta. ANTHERÆ ſubrotundæ, parvæ, flavæ, *fig.* 5.	STAMINA: FILAMENTS numerous, capillary, yellow, inſerted into the receptacle above the calyx. ANTHERÆ roundiſh, ſmall, and yellow, *fig.* 5.
PISTILLUM: GERMEN ſubrotundum. STYLUS longitudine ſtaminum, ſuperne craſſior, inferne ſæpius curvatus. STIGMA capitatum, planum, *fig.* 6.	PISTILLUM: GERMEN roundiſh. STYLE the length of the ſtamina, thicker in its upper part, and crooked below. STIGMA forming a little flat head, *fig.* 6.
PERICARPIUM: CAPSULA ſubrotunda, calyce tecta, unilocularis, trivalvis, *fig.* 7.	SEED-VESSEL: a roundiſh CAPSULE, covered with the calyx, of one cavity and three valves, *fig.* 7.
SEMINA plurima, majuſcula, ovato-acuta, rufa, *fig.* 8.	SEEDS numerous, rather large, ovate, pointed, and of a reddiſh brown colour, *fig.* 8.

Moſt of the plants of the Ciſtus tribe are highly eſteemed for their beauty, and generally cultivated in the gardens of the curious. Though our preſent ſpecies cannot vie with many of thoſe which are the produce of warmer climates, yet it is one of the moſt ornamental of our native plants, and admirably well calculated to decorate a rock or dry bank, eſpecially if its ſeveral varieties with white, roſe, and lemon-coloured flowers be intermixed. The particular merit of this plant is, that it is hardy, eaſily propagated, either by ſeeds or cuttings, and continues for the greateſt part of the ſummer to put forth daily a multitude of new bloſſoms.

Mr. LAWSON is ſaid by Mr. RAY to have found it producing white flowers. I have myſelf obſerved a wild variety with pale yellow bloſſoms. A variety with double flowers is mentioned by HALLER, which, if it could be procured, would be a valuable acquiſition to our gardens. LINNÆUS has remarked, that the petals ſometimes have an orange-coloured ſpot at their baſe; and the leaves have been obſerved to vary much in breadth.

In chalky ſoils the *Ciſtus Helianthemum* is extremely common; but as that does not abound in the neighbourhood of *London*, it is conſequently ſcarce with us.

On a cloſe examination of the hairs on the leaves we diſcovered them to be forked; a character which may, perhaps, contribute to diſtinguiſh it from the *polifolia*, to which it ſeems very nearly related.

It flowers from *June* to *Auguſt.*

Cistus Helianthemum.

Papaver dubium

PAPAVER DUBIUM. LONG-SMOOTH-HEADED POPPY.

PAPAVER *Lin. Gen. Pl.* POLYANDRIA MONOGYNIA.

Cor. 4-petala. *Cal.* 2-phyllus. *Capſula* 1-locularis, ſub ſtigmate perſiſtente poris dehiſcens.

Raii Syn Gen. 22. HERBÆ VASCULIFERÆ FLORE TETRAPETALO ANOMALÆ.

PAPAVER *dubium* capſulis oblongis glabris, caule multifloro ſetis adpreſſis, foliis pinnatifidis inciſis. *Lin. Syſt. Vegetab.* p. 407. *Sp. Pl.* 726. *Fl. Suec. n.* 467.

PAPAVER foliis hiſpidis, pinnatis, pinnis lobatis, fructu ovato lævi. *Haller. Hiſt. n.* 1063.

PAPAVER erraticum capite longiſſimo glabro. *Tourn. Inſt.* 238.

PAPAVER laciniato folio, capitulo longiore glabro, ſeu Argemone capitulo longiore glabro. *Mor. H. R. Bl. H. Ox. II.* 279. *S. III. t.* 14. *fig.* 11. *Raii Syn.* p. 309. Smooth-headed Baſtard-Poppy. *Hudſon. Fl. Angl.* p. 231. *Lightfoot Fl. Scot.* p. 280.

This plant, in its general appearance, is ſo very ſimilar to the *Papaver Rhœas*, as often to be overlooked and miſtaken for that ſpecies. Were the flowers white, as JACQUIN informs us they conſtantly are in Auſtria, the two plants would be much more obviouſly diſtinguiſhed; but, fortunately, it has a few characters which always point it out to the attentive obſerver. Theſe are principally drawn from the Capſules and Flower-ſtalks; the Capſules of the *Rhœas* are broad and ſhort, ſomewhat reſembling one-half of an egg cut tranſverſely: thoſe of the *dubium* are long and ſlender. Such is the general appearance of the two Capſules, which, however, are ſubject to conſiderable variation. In the *Rhœas*, the hairs on the Flower-ſtalk are ſtrong, rigid, and ſpread horizontally; in the *dubium* they are finer, and preſſed upward cloſe to the ſtalk *. On the young Flower-ſtalks they aſſume a ſhining, ſilvery-white appearance, which looks very beautiful. Below the Flower-ſtalks, on the other parts of the plant, the hairs ſpread out. In this laſt character we do not recollect to have ever been deceived. Beſides theſe, which are the principal differences, the ſtalks and leaves of the *dubium* are much paler: the flowers are alſo much ſmaller, and leſs intenſely red.

Culture produces no alteration in the conſtancy of its characters.

In Batterſea Fields, where the ſoil is light, the *dubium* is nearly as common, and as much of a weed, as the *Rhœas*; nor is it unfrequent on walls, in the environs of the Metropolis; according to Mr. LIGHTFOOT, it is the moſt common ſpecies in North Britain.

In a corn field, betwixt Croydon and Shirley Common, we once noticed ſeveral ſpecimens of this poppy with very large Capſules, which, if we miſtake not, were diſeaſed.

It flowers in June.

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* JACQUIN's figure repreſents the hairs of the Flower-ſtalks reverſed, and the leaves too finely divided.

PAPAVER ARGEMONE. LONG PRICKLY-HEADED POPPY.

PAPAVER *Lin. Gen. Pl.* POLYANDRIA MONOGYNIA.

Cor. 4 petala. *Cal.* 2 phyllus. *Capſula* 1-locularis, ſub ſtigmate perſiſtente poris dehiſcens.

Raii Syn. Gen. 22. HERBÆ VASCULIFERÆ, FLORE TETRAPETALO ANOMALÆ.

PAPAVER *Argemone* capſulis clavatis hiſpidis, caule folioſo multifloro. *Lin. Syſt. Vegetab. p.* 407. *Spec. Pl.* 725. *Fl. Suec. n.* 466.

PAPAVER foliis hiſpidis, pinnatis, pinnis lobatis, capitulis ellipticis, hiſpidis. *Haller Hiſt. n.* 1063.

PAPAVER *Argemone. Scopoli Fl. Carn. n.* 636.

ARGEMONE capitulo longiore. *C. Bauh. Pin,* 172. *Ger. emac.* 273. *Park.* 370.

PAPAVER laciniato folio, capitulo hiſpido longiore. *Raii Syn. p.* 308. Long rough-headed baſtard Poppy. *Hudſon. Fl. Angl. ed.* 2. *p.* 230. *Lightfoot Fl. Scot. p.* 279.

RADIX annua, ſimplex, fibroſa.	ROOT annual, ſimple, and fibrous.
CAULIS: ubi læte creſcit caules profert plures, pedales, et ultra, folioſos, adſcendentes, hirſutos, inter ſegetes vero caule ſolitario erecto ſæpius gaudet.	STALK: where the plant grows luxuriantly, it puts forth ſeveral leafy, hairy ſtalks, a foot or more in height, and bending upwards, but among corn it is moſt commonly found with a ſingle upright ſtem.
FOLIA radicalia plurima, longe petiolata, pinnata, pinnis inciſo-dentatis, dentibus mucronatis, caulina tripartita, pinnatifida, omnibus piloſis, ſuperne ſaturate viridibus, nitidis, inferne pallidioribus.	LEAVES next the root numerous, ſtanding on long foot-ſtalks, pinnated, the pinnæ deeply indented, the teeth terminating in a ſhort point, thoſe of the ſtalk deeply divided into three ſegments which are pinnatifid, all the leaves are hairy, on the upper ſide of a deep green colour, and ſhining, on the underſide paler.
PEDUNCULI piloſi, pilis adpreſſis.	FLOWER-STALKS hairy, hairs preſſed cloſe to the ſtalk.
CALYX: PERIANTHIUM diphyllum, ſeu triphyllum, deciduum, papilloſo-hiſpidum.	CALYX: a PERIANTHIUM compoſed of two or three leaves, deciduous, hiſpid, the hairs iſſuing from ſmall papillæ or prominent points.
COROLLA: PETALA quatuor, miniata, ſuberecta, remotiuſcula, obverſe ovata, apice crenulata, baſi nigricantia, maxime caduca, *fig.* 1.	COROLLA: four PETALS, of a ſcarlet colour, nearly upright, a little diſtant from each other, inverſely ovate, finely notched at top, and blackiſh at the baſe, *fig.* 1.
STAMINA: FILAMENTA viginti circiter, purpurea, plana, apice dilatata, nitida. ANTHERÆ breviſſime pedicellatæ, biloculares. POLLEN cæruleſcens, *fig.* 2. auct. *fig.* 3.	STAMINA: about twenty FILAMENTS, of a purple colour, flat, dilated at top, and ſhining. ANTHERÆ ſtanding each on a very ſhort foot-ſtalk, having two cavities. POLLEN blueiſh, *fig.* 2. one of the ſtamina magnified, *fig.* 3.
PISTILLUM: GERMEN longitudine filamentorum, clavatum, ſubangulatum, hiſpidum, pilis canis, adpreſſis. STIGMATIS radii 3 ad 5 villoſi, cæruleſcentes, *fig.* 4.	PISTILLUM: GERMEN the length of the filaments, thickeſt at top, ſomewhat angular, hiſpid, the hairs grey and preſſed to it. STIGMA compoſed of 3 to 5 villous rays, of a bluiſh colour, *fig.* 4.
PERICARPIUM: CAPSULA oblonga, clavata, ſubanguloſa, hiſpida, inferne nudiuſcula, purpuraſcens, *fig.* 5.	SEED-VESSEL: an oblong, club-ſhaped CAPSULE, ſomewhat angular, hiſpid, below for the moſt part naked, of a purpliſh colour, *fig.* 5.
SEMINA plurima, minuta, nigricantia, *fig.* 6, 7.	SEEDS numerous, minute, and blackiſh, *fig.* 6, 7.

This ſpecies of Poppy is diſtinguiſhed by a variety of particulars beſides its long prickly heads, which, though not abſolutely neceſſary to diſcriminate the ſpecies, are well worthy of our attention. The diviſions of the leaves are finer than in any of the other poppies. The petals in general grow more upright; and, inſtead of having the edges falling over each other, are uſually a little diſtant. The ſtamina are very remarkable, having the filaments uncommonly dilated towards the top, not at the baſe, as HALLER aſſerts; and the Antheræ ſtand on a very ſlender foot-ſtalk placed on the top of each filament.

Like moſt of the other poppies it uſually grows in corn fields, and is not very unfrequent in the neighbourhood of London. About the beginning of June it bloſſoms in Batterſea Fields; but is often overlooked from the extreme fugacity of its petals, which rarely continue expanded more than ſix hours.

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Papaver Argemone

ORIGANUM VULGARE. WILD MARJORAM.

ORIGANUM. *Lin. Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.

Strobilus tetragonus, ſpicatus, calyces colligens. *fig.* 6.

Raii Synop. *Gen.* 14. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

ORIGANUM *vulgare* ſpicis ſubrotundis paniculatis conglomeratis, bracteis calyce longioribus ovatis. *Lin. Syſt. Vegetab. p.* 452. *Spec. Pl. p.* 824. *Fl. Succ. n.* 534.

ORIGANUM foliis ovatis, umbellis coloratis, ſtaminibus exſertis. *Haller hiſt. n.* 233.

ORIGANUM *vulgare. Scopoli Fl. Carn. n.* 740.

ORIGANUM ſylveſtre. *Bauh. pin.* 223.

ORIGANUM anglicum. *Ger. emac.* 665.

MAJORANA ſylveſtris. *Park.* 12.

ORIGANUM vulgare ſpontaneum. *Bauh. hiſt.* III. 236.

Raii Syn. 236. Wild Marjoram. *Hudſon Fl. Angl. ed.* 2. *p.* 262. *Lightfoot Fl. Scot. p.* 317.

RADIX perennis, repens, horizontalis, fuſca, plurimis fibris capillata.	ROOT perennial, creeping, horizontal, brown, tufted with numerous fibres.
CAULIS pedalis, ad ſeſquipedalem, erectus, tetragonus, purpuraſcens, pubeſcens, ramoſus.	STALK, a foot or a foot and a half high, upright, four cornered, purpliſh, downy, and branched.
RAMI oppoſiti, erecti, caule teneriores, in cæteris conformes.	BRANCHES oppoſite, upright, more tender than the ſtalk, in other reſpects ſimilar.
FOLIA ad genicula, oppoſita, petiolata, ovata, acuta, minutim et rariter dentata, ſupra glabriuſcula, ſubtus pubeſcentia, utrinque punctata, margine minutim ciliata, patentia.	LEAVES placed at the joints, oppoſite, ſtanding on foot-ſtalks, ovate, pointed, finely and rarely toothed, above nearly ſmooth, beneath downy, dotted on both ſides, the edge finely fringed, ſpreading.
PETIOLI pubeſcentes.	LEAF-STALKS downy.
AXILLÆ foliorum in planta culta foliolis onuſtæ.	ALÆ of the leaves, in the cultivated plant, bearing numerous ſmall leaves.
FLORES paniculati, *panicula* e ſpicis plurimis, ſubrotundis, conglomeratis compoſita.	FLOWERS forming a *panicle*, compoſed of numerous, roundiſh ſpikes, growing in cluſters.
BRACTEÆ ovato-lanceolatæ, ſeſſiles, concavæ, integræ, corollâ intenſius coloratæ, ad lentem pubeſcentes, floribus ſubjectæ ſingulæ, *fig.* 1.	FLORAL-LEAVES ovato-lanceolate, ſeſſile, concave, entire, more deeply coloured than the corolla, appearing downy when magnified, placed one under each flower, *fig.* 1.
CALYX: PERIANTHIUM monophyllum, tubulatum, ſtriatum, ſubpubeſcens, pedicellatum, longitudine fere bracteæ, ore barbato, quinquefido, laciniis acutis, erectis, æqualibus, purpureis, *fig.* 2.	CALYX: A PERIANTHIUM of one leaf, tubular, ſtriated, ſlightly downy, ſtanding on a ſhort foot-ſtalk, and almoſt the length of the floral-leaf, the mouth bearded, divided into five, pointed, upright, equal, purple ſegments, *fig.* 2.
COROLLA infundibuliformis, purpurea, *tubus* villoſus, ſenſim ſurſus ampliatus, calyce longior, *limbus* bilabiatus, *labium ſuperius* erectum, bifidum, obtuſum, *inferius* trifidum, patens, obtuſum, *fig.* 3.	COROLLA funnel-ſhaped, purple, the *tube* villous, gradually enlarged upwards, longer than the calyx, the *limb* compoſed of two lips, the *upper lip* upright, bifid and obtuſe, the *lower lip* trifid, ſpreading and obtuſe, *fig.* 3.
STAMINA: FILAMENTA quatuor, purpurea, corollâ paulo longiora, duobus inferioribus paulo longioribus; ANTHERÆ didymæ, ſaturatius coloratæ, *fig.* 4.	STAMINA: four purple FILAMENTS, a little longer than the corolla, the two lowermoſt ſomewhat the longeſt; ANTHERÆ double, and more deeply coloured, *fig.* 4.
PISTILLUM: GERMEN quadripartitum; STYLUS filiformis, corollâ longior; STIGMA bifidum, acutum, revolutum, *fig.* 5.	PISTILLUM: GERMEN divided into four parts. STYLE filiform, longer than the corolla; STIGMA bifid, pointed, and turned back, *fig.* 5.
SEMINA quatuor, ovata, in ſinu calycis conniventis.	SEEDS four, ovate, in the bottom of the calyx, which cloſes over them.

This aromatic and ornamental plant, grows wild on dry chalky hills, and gravelly ground, in moſt parts of Great Britain, though ſparingly in the vicinity of London.

It flowers in July and Auguſt.

The leaves and flowery tops of Origanum have an agreeable aromatic ſmell, and a pungent taſte, warmer than that of the Garden Marjoram, and much reſembling Thyme; with which they appear to agree in medicinal virtue. Infuſions of them are ſometimes drank as tea, in weakneſs of the ſtomach, diſorders of the breaſt, for promoting perſpiration, and the fluid ſecretions in general; they are ſometimes uſed alſo in nervine and antirheumatic baths; and the powder of the dried herb as an errhine. Diſtilled with water, they yield a moderate quantity of a very acrid and penetrating eſſential oil, ſmelling ſtrongly of the Origanum, but leſs agreeable than the herb itſelf: this oil is applied on a little cotton for eaſing the pains of carious teeth; and ſometimes diluted and rubbed on the noſtrils, or ſnuffed up the noſe, for attenuating and evacuating viſcous humours. *Lewis M. Med. p.* [illegible].

It dyes linen cloth of a reddiſh brown colour; for this purpoſe the linen is firſt macerated in alum water and dried; it is then ſoaked for two days in a decoction of the bark of the crab-tree; it is wrung out of this, boiled in a ley of aſhes, and then ſuffered to boil in the decoction. *Haller hiſt. Helv p.* 102.

According to LINNÆUS, it dyes woollen cloth alſo of a purple colour; is ſometimes uſed as a ſuccedaneum for tea, and added to beer to make it more quickly intoxicate, as likewiſe to prevent it from too quickly turning ſour.

Origanum vulgare

J. Sowerby del et sculp

Teucrium Scorodonia

TEUCRIUM SCORODONIA. SAGE-LEAVED GERMANDER, OR WOOD SAGE.

TEUCRIUM *Lin. Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.
Corollæ labium ſuperius (nullum) ultra baſin bipartitum, divaricatum ubi ſtamina.
Raii Syn. Gen. 14. SUFFRUTICES ET HERBÆ VERTICILLATÆ.
TEUCRIUM *Scorodonia* foliis cordatis ſerratis petiolatis, racemis lateralibus ſecundis, caule erecto. *Lin. Syſt. Vegetab.* p. 440. *Sp. Pl.* 789.
CHAMÆDRYS foliis cordatis productis, ſpicis longiſſimis nudis heteromallis. *Haller. Hiſt. n.* 287.
TEUCRIUM *Scorodonia.* *Scopoli Fl. Carn. n.* 721.
SCORDIUM alterum ſive ſalvia agreſtis *Baub. Pin.* 247.
SCORODONIA ſive ſalvia agreſtis. *Ger. em.* 662.
SCORODONIA Scordium alterum quibuſdam et ſalvia agreſtis. *Park.* 111. *Raii Syn.* 245. *Hudſon. Fl. Angl.* p. 248. *Lightfoot Fl. Scot.* p. 303. *Fl. Dan. t.* 485.

RADIX perennis, lignoſa, ſubrepens.	ROOT perennial, woody, and ſomewhat creeping.
CAULES plures, ſeſquipedales, bipedales et ultra, ſuberecti, tetragoni, duri, purpurei, hirſuti.	STALKS ſeveral, a foot and a half, two feet high, and more, nearly upright, four-cornered, hard, purple, and hairy.
FOLIA oppoſita, petiolata, cordato-oblonga, plerumque obtuſa, ſæpe vero acutiuſcula, ſalviæ inſtar venoſa, utrinque hirſutula, obtuſe et inæqualiter ſerrata.	LEAVES oppoſite, ſtanding on foot-ſtalks, of an oblong heart-ſhape, generally obtuſe, but often a little pointed, veiny like ſage, a little hairy on each ſide, obtuſely and unequally ſerrated.
PETIOLI hirſuti.	LEAF-STALKS hairy.
FLORES ſtraminei, racemoſi, ſecundi, racemis oppoſitis, longis, nudis, terminali duplo fere longiore.	FLOWERS ſtraw-coloured, growing all one way, on long, oppoſite, naked racemi, the terminal one of which is almoſt twice as long as the reſt.
BRACTÆA ovato-acuminata, ſingulo flori ſubjecta.	FLORAL-LEAF ovate, pointed, and placed under each flower.
CALYX: PERIANTHIUM monophyllum, tubuloſum, inferne baſi gibboſum, labio ſuperiore erecto, integro, aut obſolete trilobo; inferiore quadridentato, dentibus ſubæqualibus, *fig.* 1.	CALYX: a PERIANTHIUM of one leaf, tubular, on the under ſide gibbous at the baſe, the upper lip upright, entire or faintly three-lobed; the lower lip furniſhed with four teeth, which are nearly equal, *fig.* 1.
COROLLA monopetala, ringens; *Tubus* cylindraceus, brevis; *Labium* ſuperius ultra baſin profunde bipartitum, diſtantibus ad latera laciniis; *Labium* inferius patens, trifidum, laciniis lateralibus figura labii ſuperioris, media maxima, ſubrotunda, *fig.* 2.	COROLLA monopetalous and ringent; *Tube* cylindrical and ſhort; upper *Lip* deeply divided beyond the baſe, ſegments ſtanding wide; lower *Lip* ſpreading, trifid, lateral ſegments the ſame ſhape as the ſegments of the upper lip, the middle one very large and roundiſh, *fig.* 2.
STAMINA: FILAMENTA quatuor, quorum duo longiora, purpurea, piloſa, primo erecta, conniventia, poſtea reflexa, et disjuncta. ANTHERÆ flavæ, *fig.* 3.	STAMINA: four FILAMENTS, two of which are longer than the reſt, purple and hairy, at firſt upright, and cloſing together, afterwards turned back, and ſeparated. ANTHERÆ yellow, *fig.* 3.
PISTILLUM: GERMEN quadripartitum. STYLUS filiformis. STIGMATA duo, tenuia, *fig.* 4.	PISTILLUM: GERMEN quadripartite. STYLE filiform. STIGMATA two, ſlender, *fig.* 4.
SEMINA quatuor, ſubrotunda, nigricantia, nitida, in fundo calycis, pilis tranſverſis rigidis fere tecta, ibique detenta, ad debitam maturitatem, *fig.* 5.	SEEDS four, nearly round, blackiſh, ſhining, in the bottom of the calyx, almoſt covered with croſs rigid hairs, and kept there till they have acquired a proper degree of ripeneſs, *fig.* 5.

The Wood-ſage, or more properly ſage-leaved Germander, delights to grow in woody and hilly ſituations, among buſhes, and under hedges, where the ſoil is dry and ſtony; and in ſuch places it is not only common with us, but frequent in moſt parts of Great Britain.

It flowers in July, Auguſt, and September.

Its leaves much reſembles thoſe of Sage, from which circumſtance, and not from any botanical or medical affinity, it receives its name.

As a medicinal plant, it has never been highly celebrated. LEWIS omits it in his Materia Medica, but retains it in his Diſpenſatory: in ſmell, taſte, and medical virtues, he ſays, it comes nearer to Scordium than Sage. RUTTY relates a caſe of Vertigo, brought on by the odour which aroſe from frequently handling the herb in the diſtillation of it. He aſcribes to it the ſmell of the Hop, in lieu of which, he ſays, it may be ſubſtituted in making beer; and that, when boiled in the wort, the beer ſooner becomes clear than when hops are made uſe of. Its virtues, in this reſpect, are highly extolled by the Rev. P. LAURENTS of Bury *. We have only to wiſh, that experiment may juſtify the encomiums of our learned and benevolent friend.

“ Seeing ſo much fine ground under coſtly hops, which, it muſt be owned, had very large and verdant leaves, I
“ could not but repine at the expence of ſoil, poles, dung, and labour, beſtowed on this plant, eſpecially when
“ there is great reaſon to ſuppoſe, that the *Teucrium Scorodonia* would better anſwer the purpoſe. Of this plant I
“ can ſo far ſay, that in ſmell and taſte it reſembles Hops. The name by which it goes in ſome authors is *Ambroſia*,
“ a name announcing ſomething immortal and divine; and to this day, *Ambroiſe* is the appellation by which it goes
“ among the common people in the iſland of Jerſey. Here, when Cyder, the common beverage, has failed, I
“ have known the people malt each his barley at home, and, inſtead of Hops uſe to very good purpoſe, the
“ *Ambroiſe* of their hedges.

“ It is my ardent wiſh, I own, to ſee juſtice done to the neglected merits of this ambroſial plant; but ſhould
“ indolence, prejudice, or private intereſt, obſtruct the introduction of it into uſe, let me at leaſt intreat brewers to
“ honour it with their notice, in preference to any unpalatable and unwholeſome ſubſtitute they may have occaſion
“ to uſe in lieu of Hops.”

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* Vide Tour through Flanders, &c. publiſhed in the fourth number of Mr. YOUNG's Annals of Agriculture.

ANTIRRHINUM MINUS. THE LEAST TOAD-FLAX.

ANTIRRHINUM *Lin. Gen. Pl.* DIDYNAMIA ANGIOSPERMIA.

Cal. 5-phyllus. *Corollæ* baſis deorſum prominens, nectarifera. *Capſula* 2-locularis.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

ANTIRRHINUM *minus* foliis plerĭſque alternis lanceolatis obtuſis, caule ramoſiſſimo diffuſo. *Lin. Syſt. Vegetab.* p. 466. *Sp. Pl.* p. 852. *Fl. Suec.* p. 502.

ANTIRRHINUM viſcidum foliis inferioribus conjugatis ellipticis obtuſis hirſutis, calcare dimidii floris longitudine. *Haller. Hiſt. n.* 335.

ANTIRRHINUM *minus. Scopoli Fl. Carn. n.* 769.

ANTIRRHINUM arvenſe minus. *Bauh. pin.* 212.

ANTIRRHINUM minimum repens. *Ger. emac.* 549.

ANTIRRHINUM ſylveſtre minimum. *Parkins.* 1334.

LINARIA Antirrhinum dicta. *Raii Syn.* p. *283. The leaſt Calf's Snout or Snap-dragon. *Hudſon. Fl. Angl. ed.* 2. p. 272. *Oeder. Fl. Dan. t.* 532.

RADIX annua, ſimplex, fibroſa.	ROOT annual, ſimple, and fibrous.
CAULIS erectus, ſpithamæus, ſeu dodrantalis, ad baſin uſque ramoſus, teres, ramis inferioribus oppoſitis, ſuperioribus alternis.	STALK upright, from five to nine inches in height, branched down to the bottom, round, the lowermoſt branches oppoſite, the uppermoſt alternate.
FOLIA ut ut tota planta villoſa, ſubviſcoſa, inferiora oppoſita, patentia, ſubſpatulata, ſuperiora alterna, recurvata, lineari-lanceolata, obtuſa.	LEAVES as well as the whole plant villous, and ſomewhat viſcid, the lower ones oppoſite, ſpreading, ſomewhat ſpatula-ſhaped, the upper ones alternate, bent back, betwixt linear and lanceolate, the extremity obtuſe.
FLORES parvi, ſolitarii, alterni, pedunculati, pedunculis erectis.	FLOWERS ſmall, ſolitary, alternate, ſtanding on upright foot-ſtalks.
CALYX: PERIANTHIUM quinque-partitum, perſiſtens, laciniis linearibus, ſubæqualibus, corolla brevioribus, *fig.* 1.	CALYX: a PERIANTHIUM deeply divided into five ſegments, which are linear, nearly equal, ſhorter than the corolla and permanent, *fig.* 1.
COROLLA monopetala, tubus ſuperne purpureus, inferne maculis duabus parallelis, purpureis notatus, calcar breviſſimum ſubulatum purpuraſcens, labium ſuperius bifidum, inferne albidum, inferius trifidum, album; palatum villoſum, flaveſcens, *fig.* 2.	COROLLA monopetalous, the tube on the upper ſide purple, underneath marked with two parallel purple ſpots, ſpur very ſhort and tapering, of a purpliſh colour, the upper lip bifid, on the underſide whitiſh, the lower trifid and white, the palate villous and yellowiſh, *fig.* 2.
STAMINA: FILAMENTA quatuor, alba. ANTHERÆ nigricantes. POLLEN album.	STAMINA: four white FILAMENTS. ANTHERÆ blackiſh. POLLEN white.
PISTILLUM: GERMEN ſubovatum, viſcidum, rufeſcens. STYLUS filiformis, ſuperne purpureus. STIGMA ſimplex, album.	PISTILLUM: GERMEN ſomewhat ovate, viſcid, and of a reddiſh brown colour. STYLE filiform, on the upper part purpliſh. STIGMA ſimple and white.
PERICARPIUM: CAPSULA ovata, apice dehiſcens.	SEED-VESSEL, an ovate CAPSULE opening at top.

Botaniſts have diſtinguiſhed this ſpecies by the names of *minus* and *minimum*, as being the moſt diminutive of the genus. It may alſo be conſidered as one of the leaſt ornamental.

It is chiefly found in corn fields, eſpecially where the ſoil is ſandy. We have occaſionally noticed it in Batterſea Fields with the *Orontium*; but in many parts of Kent it grows much more plentifully.

We know of no uſe to which it is applicable; and it is too diminutive a plant to do much harm where it is moſt abundant.

Introduced into the garden, it comes up annually without any care, nor is it eaſily loſt.

It branches and ſpreads according to the luxuriance of the ſoil, and frequently grows to a much greater ſize than our figure repreſents.

It flowers from June to Auguſt.

Lurekonum minus.

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Euphrasia officinalis.

del et sculp

Euphrasia Officinalis. Common Eyebright.

EUPHRASIA *Lin. Gen. Pl.* Didynamia Angiospermia.

Cal. 4-fidus, cylindricus. *Caps.* 2-locularis, ovato-oblonga. *Antheræ* inferiores altero lobo baſi ſpinoſæ.

Raii Syn. Gen. 18. Herbæ fructu sicco singulari flore monopetalo.

EUPHRASIA *officinalis* foliis ovatis lineatis argute dentatis. *Lin. Syſt. Vegetab. p.* 460. *Sp. Pl. p.* 481. *Fl. Suec. n.* 543. *Haller hiſt.* 303.

EUPHRASIA *officinalis. Scopoli Fl. Carn. n.* 753.

EUPHRASIA officinarum. *Bauh. pin.* 233. *Ger. emac.* 663. *Parkinſ.* 1329. *Raii. Syn. p.* * 284. Eyebright, *Hudſon Fl. Angl. ed.* 2. *p.* 268. *Lightfoot Fl. Scot. p.* 323.

RADIX annua, fibroſa, albida.	ROOT annual, fibrous, and whitiſh.
CAULIS bipollicaris ad palmarem et ultra, erectus, teres, pubeſcens, purpureus, plerumque ramoſus.	STALK from two to four inches high, or more, upright, round, hoary, purple, for the moſt part branched.
FOLIA oppoſita, ovata, obtuſa, ſerrato-dentata, dentibus acuminatis, ſupra convexis, ſubtus concavis, minutim ciliatis, utrinque hirſutula, ſupra nitidula, lineata, ſubtus venoſa.	LEAVES oppoſite, ovate, obtuſe, ſerrated or indented, teeth pointed, above convex, beneath concave, finely edged with hairs, ſlightly hirſute on each ſide, above ſomewhat gloſſy, with lines impreſſed, underneath veiny.
RACEMUS terminalis, foliaceus, erectus, floribus axillaribus, oppoſitis, ſeſſilibus.	RACEMUS terminal, leafy, upright, flowers in the alæ of the leaves, oppoſite and ſeſſile.
CALYX: Perianthium monophyllum, ovatum, angulatum, perſiſtens, foliis paulo brevius, pubeſcens, quadrifidum, laciniis, lanceolatis, acuminatis, erectis, ciliatis, ſubæqualibus, *fig.* 1.	CALYX: a Perianthium of one leaf, ovate, angular, permanent, a little ſhorter than the leaves, pubeſcent, divided into four ſegments, which are lanceolate, long-pointed, upright, edged with hairs, and nearly equal, *fig.* 1.
COROLLA monopetala, alba, ringens; *Tubus* cylindricus, albus, glaber, longitudine calycis, *fig.* 2. *Limbus* bilabiatus; *Labium* ſuperius album, ſubovatum, concavum, pubeſcens, ſtriis cæruleſcentibus utrinque 3, intus pictum, obtuſum, erectum, bifidum, lobis emarginatis, *fig.* 3; inferius ſuperiori paulo majus, trifidum, laciniis omnibus emarginatis, *fig.* 4. *Faux* undique ſtriata, et picta ſtriis cæruleſcentibus, antice vero colore luteo.	COROLLA monopetalous, white, ringent; *Tube* cylindrical, white, ſmooth, the length of the calyx, *fig.* 2. *Limb* two-lip'd; upper *Lip* white, ſomewhate ovate, hollow, downy, painted on the inſide with three blueiſh ſtreaks on each ſide, blunt, upright, bifid, the lobes emarginate, *fig.* 3; the lower lip ſomewhat larger than the upper, trifid, all the ſegments emarginate, *fig.* 4. *Mouth* ſtriated all round, and painted with blueiſh ſtreaks, but anteriorly of a yellow colour.
STAMINA: Filamenta quatuor, ſubulata, purpuraſcentia, tubo inſerta, *fig.* 5. Antheræ purpureæ, bilobæ, obtuſæ, ſubtus barbatæ, conniventes, lobis ſpinula terminatis, duabus inferioribus longioribus, *fig.* 6, 7.	STAMINA: four tapering, purpliſh Filaments inſerted into the tube of the corolla, *fig.* 5. Antheræ purple, two-lob'd, obtuſe, bearded underneath, cloſing together, the lobes terminating in a ſpine, the two lowermoſt the longeſt, *fig.* 6, 7.
PISTILLUM: Germen ovatum, obtuſum, barbatum, *fig.* 8. Stylus filiformis, ſuperne pubeſcens, *fig.* 9. Stigma obtuſum, integrum, *fig.* 10.	PISTILLUM: Germen ovate, obtuſe, bearded, *fig.* 8. Style, filiform, downy, on the upper part, *fig.* 9. Stigma blunt, and entire, *fig.* 10.
PERICARPIUM: Capsula ovato-oblonga, compreſſa, obtuſa, mucronata, bilocularis, *fig.* 11.	SEED-VESSEL: an ovate, oblong, Capsule, flattened, obtuſe, with a ſhort point, of two cavities, *fig.* 11.
SEMINA plurima, albida, ſtriata, *fig.* 12.	SEEDS ſeveral, whitiſh, and ſtriated, *fig.* 12.

Eyebright is a very common plant on heaths, and paſtures, eſpecially where the ſoil is chalky; it varies much in ſize and in the branchedneſs of its ſtalk, as well as in the colour and ſize of its bloſſoms, and flowers from July to September.

Many writers on the Materia Medica, aſcribe to this plant wonderful efficacy in diſorders of the Eyes: Alston ſays, it has been long reckoned a ſpecific opthalmic, and commended for dim, weak, and watery eyes, for inflamed and ſore eyes, for cataracts, &c. yea, it is ſaid to make old eyes become young again, and the blind to ſee. Milton, who moſt probably from his own misfortune, had been induced to look into books of this ſort, thus mentions it:

> ———————— “ but to nobler ſights
> “ Michael from Adam's eyes the film remov'd,
> “ Which that falſe fruit that promis'd clearer ſight
> “ Had bred; then purg'd with *euphraſy* and rue
> “ The viſual nerve, for he had much to ſee.”

On the other hand, there are not wanting thoſe who condemn its uſe, eſpecially in inflammatory complaints of the eyes; a friend of Lobel's is ſaid nearly to have loſt his eyeſight by the uſe of it. In ſuch contrariety of ſentiment, it will, perhaps, be moſt prudent not to lay too much ſtreſs on ſo doubtful a remedy.

RHINANTHUS CRISTA GALLI. YELLOW RATTLE.

RHINANTHUS *Lin. Gen. Pl.* DIDYNAMIA ANGIOSPERMIA.

Cal. 4-fidus, ventricoſus. *Capſula* 2-locularis, obtuſa, compreſſa.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI, FLORE MONOPETALO.

RHINANTHUS *Criſta Galli* corollis labio ſuperiore compreſſo breviore. *Lin. Syſt. Vegetab. p.* 459. *Sp. Pl. p.* 840. *Fl. Suec.* 542.

ALECTOROLOPHUS calycibus glabris. *Haller. Hiſt.* 313.

MIMULUS *Criſta Galli. Scopoli Fl. Carn. n.* 751.

PEDICULARIS pratenſis lutea vel Criſta Galli. *Bauh. Pin.* 163.

CRISTA GALLI fœmina. *I. B.* III. 436.

CRISTA GALLI. *Ger. em.* 1071.

PEDICULARIS ſeu Criſta Galli lutea. *Park.* 713. Yellow Rattle or Cocks-comb. *Raii Syn.* * 284. *Hudſon. Fl. Angl. ed.* 2. *p.* 268. *Lightfoot Fl. Scot. p.* 322.

RADIX annua, ſimplex, albida, parum fibroſa.	ROOT annual, ſimple, whitiſh, furniſhed with few fibres.
CAULIS pedalis circiter, erectus, ſimplex, ſeu ramoſus, quadrangulus, glaber, purpureo maculatus.	STALK about a foot high, upright, ſimple or branched, ſquare, ſmooth, and ſpotted with purple.
FOLIA oppoſita, remotiuſcula, ſeſſilia, cordato-lanceolata, obtuſiuſcula, venoſa, lævia, ſubtus tuberculis albidis pulchre reticulata, ſerrata, ſerraturis margine craſſis et ſubinvolutis.	LEAVES oppoſite, rather remote from each other, ſeſſile, lanceolate with a heart-ſhaped baſe, bluntiſh, veiny, ſmooth, underneath beautifully reticulated with white tubercles, ſawed, the notches thick on the edge, and ſomewhat rolled back.
BRACTEÆ oppoſitæ, magnæ, foliis ſimiles at baſi latiores, et profundius inciſæ, ſerraturis acuminatis.	FLORAL-LEAVES oppoſite, large like the leaves, but broader at the baſe, and more deeply cut in, the notches pointed.
FLORES flavi, ſpicati, pedunculis breviſſimis inſidentes.	FLOWERS yellow, growing in a ſpike, and ſitting on very ſhort foot-ſtalks.
CALYX: PERIANTHIUM monophyllum, ſubrotundum, inflatum, compreſſum, quadridentatum, dentibus equalibus, pallide virens, venoſum, perſiſtens, *fig.* 1.	CALYX: a PERIANTHIUM of one leaf, roundiſh, inflated, flattened, having four equal teeth, of a pale green colour, and permanent, *fig.* 1.
COROLLA monopetala, ringens. *Tubus* ſubcylindraceus, longitudine calycis; *labium* ſuperius galeatum, compreſſum, emarginatum, margine anteriori utrinque violaceo; *labium* inferius trifidum, laciniis lateralibus planis, rugoſis, intermedia majori, marginibus involutis, *fig.* 2.	COROLLA monopetalous, ringent. *Tube* ſomewhat cylindrical, the length of the calyx; the upper *lip* helmet-ſhaped, flattened, with a notch on the end, the anterior edge blueiſh on each ſide, the lower *lip* trifid, the lateral ſegments flat and wrinkled, the middle one largeſt, the edges rolled inward, *fig.* 2.
STAMINA: FILAMENTA quatuor, longitudine labii ſuperioris, ſub quo recondita, quorum duo breviora. ANTHERÆ incumbentes, hinc bifidæ, hirſutæ, *fig.* 3.	STAMINA: four FILAMENTS, the length of the upper lip, under which they lie hid, two of which are ſhorter than the others. ANTHERÆ incumbent, at one end bifid, and hairy, *fig.* 3.
PISTILLUM: GERMEN ovatum, compreſſum, glabrum. STYLUS filiformis, ſtaminibus longior. STIGMA obtuſum, inflexum, *fig.* 4.	PISTILLUM: GERMEN ovate, flattened, ſmooth. STYLE filiform, longer than the ſtamina. STIGMA blunt, and bent downwards, *fig.* 4.
PERICARPIUM: CAPSULA orbiculata, mucronata, compreſſa, bilocularis, bivalvis, *fig.* 7.	SEED-VESSEL: a round, flat CAPSULE of two cavities and two valves, terminating in a ſhort point, *fig.* 7.
SEMINA plurima, majuſcula, compreſſa, ſubreniformia, libera, *fig.* 8.	SEEDS ſeveral, rather large, flattened, ſomewhat kidney-ſhaped and looſe, *fig.* 8.

The ſeeds of this plant, when ripe, rattle in the huſks, and hence its name. LINNÆUS informs us, that this circumſtance guides the Swediſh peaſant in mowing his graſs for hay. In the neighbourhood of London hay-making commences while this plant is in full bloom.

It abounds in moſt of our paſtures, and flowers early in June.

Agriculturally conſidered, we may rank it with the uſeleſs plants.

In the third edition of RAY's Synopſis, DILLENIUS, on the authority of Dr. RICHARDSON, adds another ſpecies, which he calls *Pedicularis major anguſtifolia ramoſiſſima flore minore luteo, labello purpureo.* Found near York, and alſo in Northumberland. This, however, is conſidered by ſucceeding Botaniſts as a variety only, and is not found with us.

Rhinanthus Crista Galli

Schrophularia aquatica.

SCHROPHULARIA AQUATICA. WATER-FIGWORT, or WATER-BETONY.

SCHROPHULARIA *Lin. Gen. Pl.* DIDYNAMIA ANGIOSPERMIA.
Cal. quinquefidus. *Cor.* ſubgloboſa, reſupinata. *Capſ.* bilocularis.
Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI, FLORE MONOPETALO.
SCHROPHULARIA *aquatica* foliis cordatis obtuſis petiolatis decurrentibus, caule membranis angulato racemis terminalibus, *Lin. Syſt. Vegetab.* p. 468. *Sp. Pl.* p. 864.
SCHROPHULARIA caule alato quadrangulo paniculato, foliis ovato lanceolatis. *Hal. Hiſt.* 326.
SCHROPHULARIA *aquatica. Scopoli Fl. Carn.* n. 776.
SCHROPHULARIA aquatica major. *Bauh. Pin.* 235.
BETONICA aquatica. *Ger. emac.* 715.
BETONICA aquatica major. *Parkinſon.* 613. *Raii Syn.* 283. Water-Betony, but more truly Water-Figwort. *Hudſon Fl. Angl.* p. 275. *Lightfoot Fl. Scot.* p. 329.

RADIX perennis, craſſa, fibris numeroſis, majuſculis, longis, albis, donata.	ROOT perennial, thick, furniſhed with numerous, large, long, white fibres.
CAULIS tripedalis, ad orgyalem, erectus, ramoſus, lævis, quadrangularis, purpureus, angulis alatis; rami folioſi, cauli ſimiles.	STALK from three to ſix feet in height, upright, branched, ſmooth, four-cornered, purple, the angles winged, branches leafy, like the ſtalk.
FOLIA petiolata, oppoſita, diſtantia, decurrentia, ſubconnata, cordato-oblonga, ſubinde appendiculata, obtuſa, venoſa, crenata, nuda.	LEAVES ſtanding on foot-ſtalks, oppoſite, remote from each other, uniting in ſome degree at the baſe, current, oblong heart-ſhaped, having ſometimes little appendages, obtuſe, veiny, crenated, and ſmooth.
FLORES paniculato-ſpicati, terminales.	FLOWERS terminal, growing in a panicle-like ſpike.
RAMI paniculæ oppoſiti, trichotomi, bracteâ lanceolata ſuffulti, pedunculis lateralibus, multifloris, bractæatis, ſubviſcidis, intermedio ſolitario.	BRANCHES of the panicle oppoſite, trichotomous, ſupported by a pointed floral-leaf, flower-ſtalks lateral, many-flowered, furniſhed with floral leaves, ſomewhat viſcid, the middle one ſolitary.
CALYX: PERIANTHIUM monophyllum, quinquefidum, perſiſtens, laciniis corollâ brevioribus, rotundatis, membranâ fuſcâ lacerâ marginatis, *fig.* 1.	CALYX: a PERIANTHIUM of one leaf, divided into five ſegments and permanent, the ſegments ſhorter than the corolla, round and edged with a ragged brown membrane. *fig.* 1.
COROLLA monopetala, inæqualis, atro-rubens. *Tubus* globoſus, magnus, inflatus, *fig.* 2. *Limbus* quinquepartitus, laciniis duabus majoribus ſuberectis, rotundatis, *fig.* 3. cum intermedia ſquamula labrum parvum mentiente ſubjecta, *fig.* 4. duabus lateralibus patulis, *fig.* 5. tertia minima ſubinvoluta, *fig.* 6.	COROLLA monopetalous, unequal, of a deep red colour. *Tube* globular, large inflated. *fig.* 2. *Limb* deeply divided into five ſegments the two uppermoſt of which are largeſt, ſomewhat upright, and rounded, *fig.* 3. with an intermediate little ſcale like a ſmall lip placed underneath them, *fig.* 4. the two ſide ones ſpreading, *fig.* 5. the third very minute and rolled up, *fig.* 6.
STAMINA: FILAMENTA quatuor, alba, linearia, ſubviſcida, declinata, longitudine corollæ, quorum duo ſeriora. ANTHERÆ didymæ, flavæ, *fig.* 7, 8.	STAMINA: four white, linear, ſlightly viſcid FILAMENTS, inclining downwards, the length of the corolla, two of which are later than the others. ANTHERÆ double and yellow, *fig.* 7, 8.
PISTILLUM: GERMEN ſubconicum, glandula nectarifera cinctum, *fig.* 9, 10. STYLUS ſubulatus, apice ſubincurvatus, *fig.* 11. STIGMA obtuſum, flavum, *fig.* 12.	PISTILLUM: GERMEN ſomewhat conical, ſupported by a nectareous gland, *fig.* 9, 10. STYLE tapering, bending downwards a little at the top, *fig.* 11. STIGMA blunt and yellow, *fig.* 12.
PERICARPIUM: CAPSULA ſubrotunda, acuminata, bilocularis, bivalvis, diſſepimento e marginibus valvularum inflexis conſtructo, apice dehiſcens, *fig.* 13.	SEED-VESSEL a roundiſh pointed CAPSULE, of two cavities and two valves, partition formed by the edges of the valves turning in, opening at top.
SEMINA plurima parva, fuſca.	SEEDS numerous, ſmall, and brown.
RECEPTACULUM unum, ſubrotundum in utrumque loculamentum ſe inſinuans.	RECEPTACLE ſingle, roundiſh, inſinuating itſelf into each cavity or cell.

The name of *Water-Betony* (by which this plant is, perhaps, more generally better known than by its other name of *Water-Figwort*) has been aſſigned it from the great ſimilitude which its leaves bear to thoſe of the *Wood-Betony*; but as it differs from it totally in its fructification, and conſequently in its generic character, the latter name is certainly to be preferred.

In its uſual ſtate of growth it has little to recommend it as an ornamental plant; but when variegated, few exceed it in beauty. In this ſtate it is not uncommon in the nurſeries about *London*.

It grows naturally by the ſides of rivers, ponds, and wet ditches; and flowers from *June* to *September*.

Medicinally the leaves of this ſpecies are recommended for the ſame purpoſes of thoſe of the *Scrophularia nodoſa*, to which they have by ſome been preferred: in taſte and ſmell they are ſimilar, but weaker. Mr. MARCHANT reports, in the Memoires of the French Academy, that this plant is the ſame with the *Iquetaia* of the Brazilians, celebrated as a ſpecific corrector of the ill flavour of Sena. On his authority the *Edinburgh* College, in their common infuſion of that drug, directed two-thirds its weight of the Water-figwort leaves to be joined; but as they have now diſcarded this ingredient, we may preſume that it was not found to be of much uſe. *Lewis's Mat. Med. Ed. Aikin*, p. 598.

The diſagreeable ſmell which attends this plant when bruiſed makes it rejected by cattle in general; neverthelefs, both its leaves and flowers are much reſorted to by different kinds of inſects. The *Tenthredo Schrophulariæ Lin.* feeds on its foliage, both in its caterpillar and perfect ſtate. The beautiful caterpillar of the *Phalæna Verbaſci* feeds on this plant as well as on the Mullein. Both bees and waſps collect great quantities of honey from its flowers, and as theſe continue to be produced for a great length of time, it is one of thoſe plants which perhaps may be made to grow near bee-hives with advantage.

Thlaspi campestre.

THLASPI CAMPESTRE. MITHRIDATE MUSTARD.

THLASPI *Lin. Gen. Pl.* TETRADYNAMIA SILICULOSA.

Silicula emarginata, obcordata, polyſperma: valvulis navicularibus, marginato-carinatis.

Raii Syn. Gen. 21. HERBÆ TETRAPETALÆ SILIQUOSÆ ET SILICULOSÆ.

THLASPI *campeſtre* ſiliculis ſubrotundis, foliis ſagittatis dentatis, incanis. *Lin. Sp. Pl.* p. 902. *Syſt. Vegetab.* p. 491. *Fl. Suec.* n. 575.

NASTURTIUM foliis imis petiolatis ovatis, caulinis ſagittatis dentatis. *Haller. Hiſt.* n. 509.

THLASPI campeſtre. *Scopoli Flor. Carn.* n. 807.

THLASPI arvenſe, Vaccariæ folio majus. *Bauh. Pin.* 106.

THLASPI mithridaticum ſive vulgatiſſimum Vaccariæ folio. *Parkins.* p. 835.

THLASPI vulgatius. *J. Bauh. II.* p. 921.

THLASPI vulgatiſſimum. *Ger. em.* p. 262. *Raii Syn.* 305. Mithridate Muſtard, Baſtard Creſſes. *Hudſon. Fl. Angl.* p. 281. *Lightfoot Fl. Scot.* p. 341.

RADIX annua, ſimplex, fibroſa	ROOT annual, ſimple, and fibrous.
CAULIS pedalis ad ſeſquipedalem, erectus, teres, ſubanguloſus, villoſus, ſuperne tantum ramoſus.	STALK a foot or a foot and a half high, upright, round, very ſlightly angular, villous, branched at top only.
FOLIA radicalia longe petiolata, oblongo-ovata, obtuſa, ſæpius ſubintegra, interdum vero baſi pinnatifida, cito marceſcentia, caulina ſagittata, ſparſa, conferta, ſubereſta, villoſa, dentata, amplexicaulia.	LEAVES next the root ſtanding on long foot-ſtalks, of an oblong ovate ſhape, for the moſt part nearly entire, but ſometimes pinnatifid at the baſe, ſoon decaying, thoſe of the ſtalk arrow-ſhaped, placed irregularly, numerous, nearly upright, villous, toothed, and embracing the ſtalk.
FLORES minimi, albi.	FLOWERS very ſmall and white.
RACEMI longi, erecti.	RACEMI long and upright.
PEDUNCULI teretes, villoſi, patentes, ſiliculis paulo longiores.	FLOWER-STALKS round, villous and ſpreading, a little longer than the ſeed-pods.
CALYX: PERIANTHIUM tetraphyllum, foliolis ovatis, obtuſis, concavis, ad lentem ſubpiloſis, marginibus et apicibus albidis, alternis paulo brevioribus et anguſtioribus, *fig.* 1.	CALYX: a PERIANTHIUM of four leaves, the leaflets ovate, obtuſe, hollow, ſlightly hairy when magnified, the edges and tips whitiſh, the alternate ones ſhorter and narrower than the others, *fig.* 1.
COROLLA: PETALA quatuor, alba, calyce paulo longiora, limbo ſubrotundo, ungue gracili, *fig.* 2.	COROLLA compoſed of four white PETALS, a little longer than the calyx, the limb roundiſh, and claw very ſlender, *fig.* 2.
STAMINA: FILAMENTA ſex, quorum duo paulo breviora. ANTHERÆ flavæ, *fig.* 3.	STAMINA: ſix FILAMENTS, of which two are ſhorter than the reſt, *fig.* 3
PISTILLUM: GERMEN ovale, compreſſum, emarginatum. STYLUS breviſſimus. STIGMA capitatum, *fig.* 4.	PISTILLUM: GERMEN oval, flat, emarginate. STYLE very ſhort. STIGMA forming a little head, *fig.* 4.
PERICARPIUM: SILICULA ovata, obtuſa, emarginata diſperma, inferne gibba, ſuperne concava, ſeminibus protuberantibus, *fig.* 5, 6.	SEED-VESSEL: an ovate POD, obtuſe, emarginate, containing two ſeeds, underneath gibbous, above concave, the ſeeds protuberating, *fig.* 5, 6.

The *Thlaſpi arvenſe ſiliquis latis* of *C. Baubine*, and the preſent ſpecies, are the two whoſe ſeeds have been ſelected from this numerous genus for medicinal uſe. Theſe appear to have been uſed indiſcriminately; and ſometimes the ſeeds of the common Creſs (*Lepidium ſativum*) have been ſubſtituted for both. Their virtues appear to be pretty ſimilar: RUTTY prefers thoſe of the *arvenſe*, as being the moſt active: they certainly have much more of the alliaceous taſte than thoſe of the *campeſtre*.

In the preſent practice they are rarely made uſe of any otherwiſe than as ingredients in the Venice Treacle and Mithridate, though ſome recommend them in different diſorders, preferably to the common Muſtard, with which they agree nearly in their pharmaceutic properties. *Lewis, Mat. Med.* p. 647.

The preſent ſpecies is not an unuſual inhabitant of corn-fields; nevertheleſs it is rather a ſcarce plant with us. We have noticed it in the greateſt plenty about Coomb Wood, near Kingſton. Dr. GOODENOUGH informs me, it is not uncommon in Gunnerſbury Lane, near Ealing.

It flowers in June, and ripens its ſeeds in July and Auguſt.

SINAPIS ALBA. WHITE MUSTARD.

SINAPIS *Lin. Gen. Pl.* Tetradynamia Siliquosa.

Cal. patens. *Cor.* ungues recti. *Glandula* inter ſtamina breviora et piſtillum, interque longiora et calycem.

Raii Syn. Gen. 21. Herbæ tetrapetalæ siliquosæ et siliculosæ.

SINAPIS alba, ſiliquis hiſpidis: roſtro obliquo longiſſimo enſiformi. *Lin. Syſt. Vegetab. p.* 503. *Sp. Pl. p.* 933. *Haller Hiſt.* 466.

SINAPIS alba. *Scopoli Fl. Carn. n.* 843.

SINAPI apii foliis. *Bauh. Pin.* 99.

SINAPI album ſiliqua hirſuta, ſemine albo vel ruffo. *I. B.* II. 856.

SINAPI ſylveſtre minus? *Parkins.* 830. *Raii Syn. p.* 295. White Muſtard. *Hudſon. Fl. Angl. ed.* 2. *p.* 298. *Lightfoot Fl. Scot. p.* 361.

RADIX annua, ſimplex, fibroſa, albida.

CAULIS ſeſquipedalis ad bipedalem, erectus, ramoſus, craſſiuſculus, *ſtriatus*, tener, fragilis, hirſutus, pilis numeroſis, rigidiuſculis, deorſum verſis.

FOLIA petiolata, alterna, radicalia et pleraque caulina, pallide virentia, venoſa, utrinque hirſutula, pinnis trium circiter parium, inferioribus minimis, extima ſubtriloba, omnibus varie dentatis.

FLORES lutei, terminales.

PEDUNCULI tetragono-ſtriati.

CALYX: Perianthium tetraphyllum, foliolis *patentibus*, concavis, deciduis, lævibus, ſublinearibus, apice obtuſis, *fig.* 1, 2.

COROLLA: Petala quatuor, ſubrotunda, plana, patentia, integra, *unguibus* erectis, linearibus, longitudine vix calycis, *fig.* 3.

STAMINA: Filamenta ſex, quorum duo breviora, vireſcentes, ſubulatæ. Antheræ luteæ, erectæ, ſubſagittatæ, *fig.* 4.

GLANDULÆ ut in pleriſque hujus generis, *fig.* 5.

PISTILLUM: Germen obovatum, ſubanguloſum, ad lentem hiſpidum. Stylus ſubulatus, anceps, germine duplo fere longior, ſtaminibus paulo brevior. Stigma capitatum, *fig.* 6.

PERICARPIUM: Siliqua hirſuta, ſubarticulata, ſubtetraſperma, roſtro longiſſimo enſiformi terminata, *fig.* 7, 8.

SEMINA majuſcula, fuſca, *fig.* 9.

ROOT annual, ſimple, fibrous, and whitiſh.

STALK a foot and a half to two feet high, upright, branched, ſomewhat clumſy, *finely grooved*, tender, brittle, and hirſute, the hairs numerous, ſtiffiſh, and turned downward.

LEAVES ſtanding on foot-ſtalks, alternate, thoſe next the root and moſt of thoſe on the ſtalk pinnated, of a pale green colour, veiny, ſlightly hirſute on both ſides, compoſed of three or four pair of pinnæ, the lowermoſt of which are very ſmall, the terminal one often three-lobed, and all of them variouſly indented.

FLOWERS yellow, and terminal.

FLOWER-STALKS having four grooves or corners.

CALYX: a Perianthium of four leaves, which are *ſpreading*, concave, deciduous, ſmooth, ſomewhat linear, and blunt at top, *fig.* 1, 2.

COROLLA: four roundiſh Petals, flat, ſpreading, entire, *claws* upright, linear, ſcarcely the length of the calyx, *fig.* 3.

STAMINA: ſix Filaments, two of which are ſhorter than the reſt, of a greeniſh colour, and tapering. Antheræ yellow, upright, ſomewhat arrow-ſhaped, *fig.* 4.

GLANDS as in moſt of this genus, *fig.* 5.

PISTILLUM: Germen inverſely ovate, ſlightly angular, hiſpid when magnified. Style tapering, two-edged, almoſt twice the length of the germen, and a little ſhorter than the ſtamina. Stigma forming a little head, *fig.* 6.

SEED-VESSEL: a hairy Pod, ſomewhat jointed, containing about four ſeeds, terminated by a very long ſword-ſhaped beak, *fig.* 7, 8.

SEEDS rather large and brown, *fig.* 9.

In the corn-fields in Buckinghamſhire, eſpecially about High Wycomb, the *Sinapis alba* is as common, and as troubleſome a weed among the corn as the *arvenſis*: with us it is found more ſparingly. It is frequently met with on banks, and among the corn in Batterſea-fields, and well known to conſtitute a part of young ſallading.

Ray has been particularly happy in pointing out the ſtriking characters of the ſeveral ſpecies of *Sinapis*, which Linnæus has adopted. The ſeed-veſſels, either in their form, ſize, or manner of growth, will always with certainty diſtinguiſh them; but as theſe plants may occur when they are not ſufficiently advanced to exhibit thoſe characters, it is neceſſary to call in others to our aſſiſtance: we may then, in addition to Linnæus's ſpecific characters, obſerve, that the *Sinapis alba* is moſt obviouſly diſtinguiſhed from the *nigra* by having its ſtalk *finely grooved*, and *ſtrongly haired*, and from the *arvenſis*, for which it is perhaps much more liable to be miſtaken, by having its leaves more divided or jagged as our figure expreſſes.

It flowers in June, and ripens its ſeeds in July.

Sinapis alba

Sinapis arvensis

SINAPIS ARVENSIS. CHARLOCK.

SINAPIS *Lin. Gen. Pl.* Tetradynamia Siliquosa.

Cal. patens. *Cor.* ungues recti. *Glandula* inter ſtamina breviora et piſtillum, interque longiora et calycem.

Raii Syn. Gen. 15. Herbæ tetrapetalæ siliquosæ et siliculosæ.

SINAPIS *arvenſis* ſiliquis multangulis toroſo-turgidis lævibus roſtro ancipiti longioribus. *Lin. Syſt. Vegetab. p.* 503. *Sp. Plant. p.* 933. *Fl. Suec.* 610. *Haller. Hiſt. n.* 467.

SINAPIS *arvenſis*. *Scopoli Fl. Carn. n.* 842.

RAPISTRUM flore luteo. *Bauh. Pin.* 95.

RAPISTRUM arvorum. *Ger. emac.* 233. *Parkinſ.* 862. *Raii Syn.* 295. Charlock or Wild Muſtard. *Hudſon. Fl. Angl. p.* 298. *Lightfoot Fl. Scot. p.* 360.

RADIX annua, ſimplex, fibroſa, rigida, albida.

CAULIS pedalis, ſeſquipedalis, et ultra, ramoſus, teres, ſolidus, ſtriato-ſulcatus, hiſpidus, purpuraſcens, ramis diffuſis.

FOLIA alterna, petiolata, patentia, ſcabriuſcula, venoſa, dentato-ſerrata, ovato-lanceolata, ſæpe integra, ſæpius vero baſi ſinuata, raro pinnata.

FLORES lutei, terminales, pedunculati.

PEDUNCULI longitudine calycis; hiſpiduli.

CALYX: Perianthium tetraphyllum, foliolis linearibus, canaliculatis, patentibus, flavis, obtuſis, piloſis, *fig.* 1.

COROLLA: Petala quatuor, lutea, obcordata, unguiculata, patentia, unguibus longitudine fere calycis, *fig.* 1,

NECTARIA: *Glandulæ* quatuor ſaturate virides.

STAMINA: Filamenta ſex, quorum duo breviora, lutea, ſubulata. Antheræ concolores, incumbentes, primo ſagittatæ, apicibus demum revolutis, *fig.* 3.

PISTILLUM: Germen cylindraceum, longitudine fere ſtyli, et paulo craſſior, nunc læve, nunc hirſutulum. Stylus longitudine ſtaminum. Stigma capitatum, bilabiatum, *fig.* 4.

PERICARPIUM: Siliqua teres, vix anguloſa, patens, lævis aut hirſuta, polyſperma, roſtro brevi ſubtetragono terminata, *fig.* 5, 6.

SEMINA plurima, minuta, nigricantia.

ROOT annual, ſimple, fibrous, rigid, and whitiſh.

STALK from one to a foot and a half high, upright, branched, round, ſolid, ſtriated or grooved, hiſpid, and purpliſh, the branches ſpreading wide.

LEAVES alternate, ſtanding on foot-ſtalks, ſpreading, roughiſh, veiny, indented or ſerrated, ovato-lanceolate, often entire, but moſt commonly jagged at the baſe, rarely pinnated.

FLOWERS of a yellow colour, growing in heads, and ſtanding on flower-ſtalks.

FLOWER-STALKS the length of the calyx, ſlightly hiſpid.

CALYX: a Perianthium of four leaves, the leaves linear, hollowed above, ſpreading, yellow, blunt and hairy, *fig.* 1.

COROLLA: four Petals of a yellow colour, inverſely heart-ſhaped, ſpreading, claws almoſt the length of the calyx, *fig.* 2.

NECTARIES: four *Glands* of a deep green colour.

STAMINA: ſix Filaments, two of which are ſhorter than the reſt, yellow and tapering. Antheræ of the ſame colour, incumbent, firſt arrow-ſhaped, tips finally rolling back, *fig.* 3.

PISTILLUM: Germen cylindrical, almoſt the length of the ſtyle, and a little thicker, ſometimes ſmooth, ſometimes a little hairy. Style the length of the ſtamina. Stigma forming a little head, divided into two lips, *fig.* 4.

SEED-VESSEL a round Pod, ſcarce perceptibly angular, ſpreading, ſmooth or hirſute, containing many ſeeds, terminated by a ſhort ſomewhat four-cornered beak, *fig.* 5, 6.

SEEDS numerous, minute, and blackiſh.

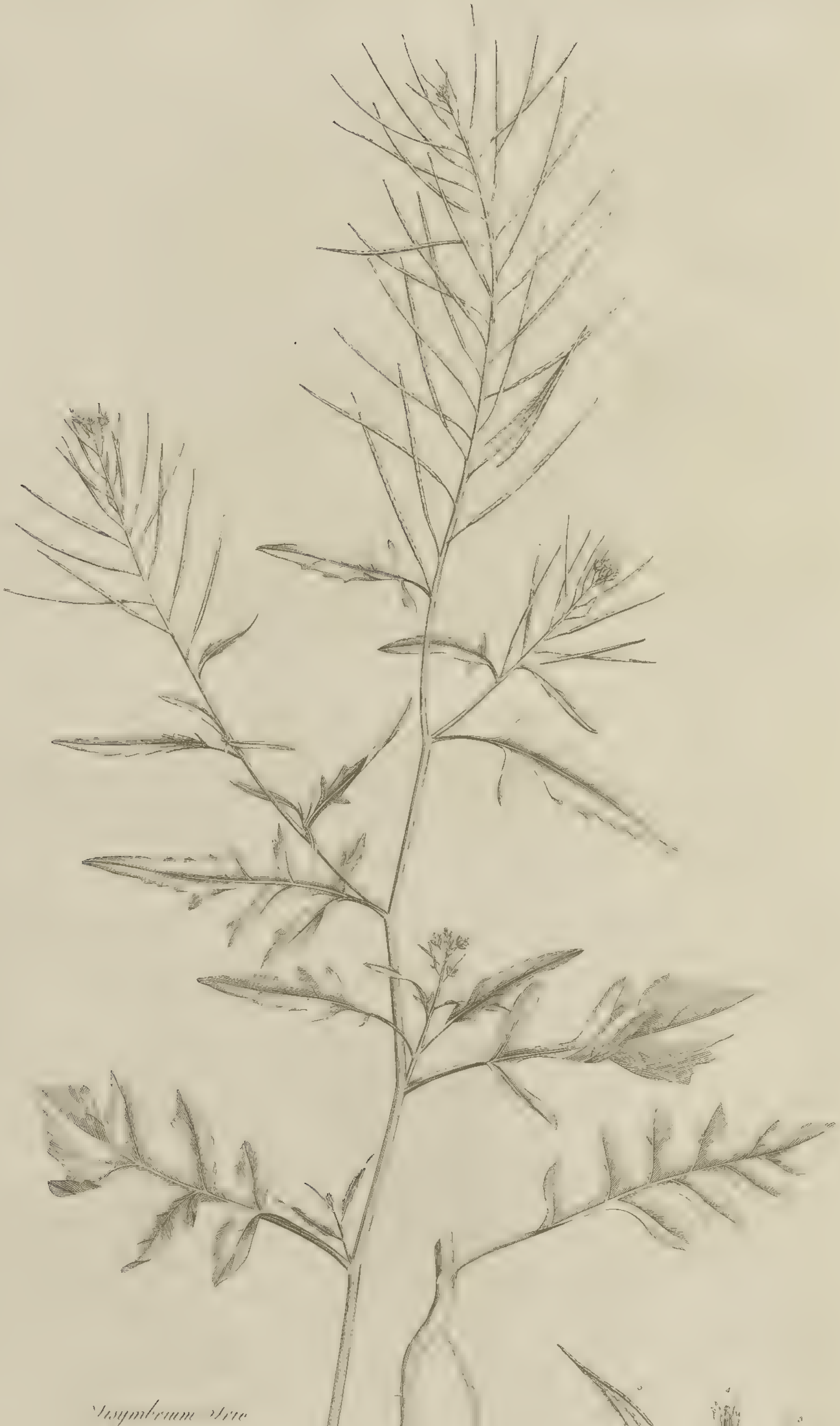
There are three plants peculiar to corn fields, which, in various parts of the kingdom, are more or leſs common, and all of which are apt indiſcriminately to be called Charlock: theſe are the *Sinapis arvenſis*, *Sinapis alba*, and *Raphanus Raphaniſtrum*; the firſt and the laſt of which are by far the moſt general. The name of *Charlock* ought, however, to be confined to the *Sinapis arvenſis*, the moſt noxious weed of the three, and as ſuch moſt carefully to extirpated from among the corn.

The leaves of this plant, on their firſt appearing above ground, and for ſome time afterwards, reſemble thoſe of the turnip ſo much, that we have known an intelligent farmer deceived by them, and miſtaken in his crop. The whole plant, when young, is often eaten by the labouring part of the community; and, like turnip-tops, is no bad ſubſtitute to other culinary plants in times of ſcarcity.

June is the month in which the Charlock flowers moſt plentifully; but it may frequently be found in bloſſom earlier, as well as much later. It is not confined to corn fields, but is almoſt equally common among rubbiſh.

It varies much in height, colour of its ſtalk, number of its branches, and degree of hairineſs. Among corn it grows taller, and is leſs branched. The ſtalk, in ſome ſituations, is wholly green; but is more frequently purple at the joints, and very often wholly ſo. The ſeed-veſſels alſo vary much in colour and hairineſs. We have not obſerved the flowers ſubject to any variation of colour.

For the means of diſtinguiſhing it from the *Raphanus Raphaniſtrum*, which at firſt ſight it conſiderably reſembles, vid. *Raphanus Raphaniſtrum* already figured.



Sisymbrium Irio

SISYMBRIUM IRIO. LONDON ROCKET.

SISYMBRIUM *Lin. Gen. Pl.* TETRADYNAMIA SILIQUOSA.

Siliqua dehiſcens, valvulis rectiuſculis. *Calyx* patens. *Corolla* patens.

Raii Syn. Gen. 21. HERBÆ TETRAPETALÆ SILIQUOSÆ ET SILICULOSÆ.

SISYMBRIUM *Irio* foliis runcinatis dentatis nudis, caule lævi; ſiliquis erectis. *Lin. Syſt. Vegetab. p.* 499. *Sp. Pl.* 921. *Fl. Suec. n.* 596.

ERYSIMUM latifolium majus glabrum. *Bauh. Pin.* 101.

IRIS lævis Apulus erucæ folio. *Col. Ecphr.* 1. 264.

ERYSIMUM latifolium Neapolitanum. *Park.* 834. *Raii Syn. p.* 298. Smoother broad-leaved Hedge-Muſtard. *Hudſon. Fl. Angl. ed.* 2 *p.* 297. *Jacquin. Fl. Auſtr. tab.* 322.

Tota planta perpetuo glaberrima eſt, nec ullum pilum aut villum habet, acre ſinapios ſapore gaudens.

RADIX annua, albida, calami anſerini craſſitie, ſimplex, quandoque ramoſa.

CAULIS pedalis, ad bipedalem, teres, hic illic purpuraſcens, nitidus, firmus inferne, non ſtriatus, ſæpius ab ipſa baſi ramoſus.

FOLIA radicalia, quæ brevi marceſcunt, et caulina pleraque, ſunt pinnatifida, ſinuata, inæqualiter dentata aut ſerrata, petiolata, patentia, flaccida, lobis ut plurimum acutis, extremo majore et longiore, ſumma haſtata, et quædam integerrima ac ſimplicia.

CORYMBI in racemos producuntur longiſſimos, modo rectos, modo flaccidos.

FLORES puſilli, flavi.

CALYX patens, flaveſcens, *fig.* 1.

PETALA obtuſa, et oblonga, ungues habent ſuberectos, ſupra hos patentiſſima, *fig.* 2.

STAMINA et STYLUS etiam flaveſcunt, *fig.* 3, 4.

SILIQUÆ graciles, ſubteretes, ad ſemina toruloſæ, et biunciales, brevibus inſiſtunt pedunculis et quaquaverſum laxe patent, *fig.* 5.

SEMINA minuta, pallide flavent, *fig.* 6.

The whole plant is always perfectly ſmooth, without any hair or down, having the biting taſte of muſtard.

ROOT annual, whitiſh, the thickneſs of a gooſe-quill, ſimple, ſometimes branched.

STALK from one to two feet high, round, here and there purpliſh, ſhining, below rigid, not ſtriated or grooved, often branched quite from the bottom.

LEAVES next the root, which ſoon wither, and moſt of thoſe on the ſtalk are pinnatifid, ſinuated, unequally toothed or ſerrated, ſtanding on foot-ſtalks, ſpreading and flaccid, the lobes for the moſt part pointed, the end one larger and longer, the uppermoſt leaves haſtate, ſome of them entire and ſimple.

CORYMBI lengthened out into long racemi, ſometimes ſtrait, ſometimes flaccid.

FLOWERS ſmall and yellow.

CALYX ſpreading and yellowiſh, *fig.* 1.

PETALS obtuſe, and oblong, having claws nearly upright, above which they ſpread widely, *fig.* 2.

STAMINA and the STYLE are alſo of a yellowiſh colour, *fig.* 3, 4.

PODS ſlender, nearly round, about two inches long, ſtanding on ſhort foot-ſtalks, and ſpreading looſely every way, ſeeds protuberant, *fig.* 5.

SEEDS minute, of a pale yellow colour, *fig.* 6.

The *Siſymbrium Irio*, though a ſcarce plant in many parts of Great Britain, is frequent enough in the neighbourhood of London: we find it on dry banks, eſpecially ſuch as are made of road ſand, walls, and among rubbiſh in uncultivated places. Its chief time of flowering is from July to September. Like many other annuals it is inconſtant as to its particular place of growth. In favourable ſeaſons and ſituations it is capable of multiplying itſelf exceedingly from the great number of ſeed veſſels which it produces. The ſeeds are very ſmall, and protuberating a little through the valves of the ſeed-veſſel give them the appearance of finely jointed pods; a character, which when preſent will readily diſtinguiſh this plant. Mr. Ray obſerved it at Faulkbourn in Eſſex, and on the walls of Berwick on the Tweed. That great naturaliſt remarks, that after the fire of London in the years 1667, 1668, it came up abundantly among the rubbiſh in the ruins. MORISON, who lived at that period, was particularly ſtruck with ſo ſingular an appearance, and in his *Preludia Botanica* has a long dialogue on this very ſubject; in which, whatever laurels he may gain as a Botaniſt, few will think him entitled to any as a Philoſopher.

As the book, containing this curious dialogue, is in few hands, we flatter ourſelves a copy of it will not be unacceptable to many of our readers.

" *Botan.* Secundo die Septembris, anno Domini, 1666, incepit incendium illud luctuoſum et ad triduum, aut
" quatriduum duravit. Nec ope humanâ (divinitùs evenit, quum non eſt malum in civitate, quod non fecit
" Dominus) extingui poterat: nam Æolus apperto ventorum carcere (ut ita loquar) regnabat: per triduum aut
" quatriduum illud. Poſt octomeſtre ſpatium, per rudera ducentorum jugerum, ſolo æquatatorum, mihi perambulanti
" verſus excambium vetus nunc. Antè illud tempus; Collegium Greſhamianum dictum tendenti, in
" veſtigiis, ædificiorum et tectorum, mihi tanta ſeſe objecit copia, Eryſimi illius, quod irio lævis Apulus alter
" Fabio Columnæ dicitur: Et eôdem revertens, menſibus duobus poſt hoc; adeò denſè pullulavit, ut falce quaſi
" Triticum, aut ſecale demeti potuerit. *Soc.* Quid inde ſequetur, unde proveniſſe tantam copiam iſtius Irionis?
" putas tu; an à ſemine ſeu ſatione? *Botan.* Quid quæſo, te movet ad talem proponendam queſtionem, cum
" ædificia omnia circa ædem Divi Pauli, et alibi paſſim in meditullio celeberrimi Emporii Londini, à mille aut
" ſaltem centenis annis: Fuere conſtructa et tectis conſervata? *Soc.* Ergò tanta copia illius ſeminis, latebat in cellis
" et cavearum fundis, et ſoli et pluviæ expoſita, fructicavit. *Botan.* Unum hoc addam: ego non ſum Plinius, ut
" ex aliorum relatione mundo imponam; nec Mattheolus ut appingam ea quæ nunquam extitere: ſed ut vis appertis

" verbis

“ verbis nec Calamiſtratis: meum tibi dicam animum. *Soc.* Dicas quæſo? *Botan.* Nullum eſt ſemen plantæ,
“ quod producit (conſervatum quam diligentiſſimè) poſt decennium; perraro poſt quinquennium: multò minùs
“ poſt centenos aliquot, et mille annos. *Soc.* Ergò aliquis ſemina iſtius plantæ, per rudera ſparſit. *Botan.* Non
“ credo imò, certò ſcio tantam iſtius Irionis, ſeminis copiam non fuiſſe in tota inſula Britanniâ, imo nec in Gallia:
“ dubito an in Germania et Italia ipſa; (cujus Neapolis eſt regnum, ubi frequentèr creſcebat tempore Fab Columnæ,)
“ unquam floruit tanta iſtius plantæ copia, ergò etiamſi ſeminatores fuiſſent (ex tuâ opinione, poſt hæc tibi à me
“ audita) non poterat tanta copia iſtius individualis ſpeciei, ſeminis; à tot Regnis ſuppeditari. *Soc.* De hoc non
“ multùm nunc dubito: ſed quid concludis, ſis rationi conſentaneus. Unde provenit tanta copia iſtius Irionis,
“ forte ſponte. Sub idem tempus, ibidem vidiſti et obſervaſti multas alias plantas, pappeſcentes, imo gramineas
“ aliaſque diverſarum claſſium. *Botan.* Vidi et attentè obſervavi. *Soc.* Undè hæ aliæ venêre? *Botan.* A ſemine
“ volatili pappeſcenti quod poteſt (ut ſupra clarè ſatis docui) ad multa Milliaria, vento transferri, et in altum attolli
“ et ubicunque ceciderit, germinat et fructificat. *Soc.* De pappeſcentibus non dubito quod dicis, inſuper Gramina,
“ denſè ſatis proveniunt: in qualibet terra ſi negligatur: quare non poteſt tuum Eryſimum, ſeu Irio lævis Apulus
“ alter in ruderibus Londinenſibus, ſponte etiam provenire. *Botan.* Non eſt par ratio inter Gramina et Eryſimum
“ hoc: Quia Graminum ſemina ſparguntur paſſim; eſt omnium vegetantium plantarum, in omnibus regionibus,
“ frequentiſſima et facilius ſeſe propagat. *Soc.* Eſt planta tamen perfecta, ex ſupra-dictis à te: ergò à ſemine, multi-
“ plicatur. *Botan.* Hoc ego ſemper credidi, et in hanc horam credo. Unum a te ſciſcitari velim, putaſne hanc
“ plantam, Irionem lævem Apulum Col. a quovis hortulano, aut incola hujus civitatis ſatam, in ruderibus fuiſſe.
“ *Soc.* Neminem hujus inſulæ primò tam curioſum, ſecundò nec tantæ ejus plantæ ſeminis, copia inſtructum
“ fuiſſe, pro certo ratum et ſtatutum habeo. Quis tam ſtolidus aut malè feriatus homo, ſi ſemina ad manum haberet
“ (quod impoſſibile ſuprà demonſtratum eſt) ruderibus ducentorum jugerum terræ, ſolo æquatorum, committeret.
“ Ergò cum nec à ſatione, nec à ſemine, ad aliquot centenos annos in ruderibus latente, produci poterat; hujus
“ plantæ tanta copia. Unde concludere vis, tantam ipſius multitudinem proveniſſe. *Botan.* Certè ut ſupra dixi ex
“ ſale partim volatili, partim fixo, ſalpetro, ſulphure, et ex terra ſive calcoſa aut ruderoſa et aqua, mixtaque
“ materia, quocunque modo appelles, per me non ſtabit. Neſcio quid mihi perſuaſum habere debeo, adhuc.
“ Probabile certè eſt, hanc plantam tam copioſè proveniſſe ſponté; ut ſupra dictum fuit. Sed hæc opinio apperit
“ januam ad philoſophraſtos contemplativos, qui indifferenter, credunt cujuſlibet generis plantas, arbores, frutices,
“ ſuffruticeſve, ex terra tanquam matrice, ſponte ſine ſemine provenire. Sed hæc opinio (ut mihi videtur) repugnat
“ ſacræ ſcripturæ, et rationi. Hæc per dialogum inter nos dixiſſe, impræſentiarum, ſat eſſe puto. Quod reſtat de
“ hac materia; Sociis virtuoſis, Pariſienſibus, et Londinenſibus, viris nobiliſſimis, clariſſimis et doctiſſimis (ex quorum
“ numero te eſſe ſcio) diſcutiendum relinquo. Vale, mi doctiſſime vir.”

SISYMBRIUM TERRESTRE. ANNUAL WATER-RADISH.

SISYMBRIUM *Lin. Gen. Pl.* Tetradynamia siliquosa.

Siliqua dehiſcens, valvulis rectiuſculis. *Cal.* patens. *Corolla* patens.

Raii Syn. Gen. Herbæ tetrapetalæ siliquosæ et siliculosæ.

SISYMBRIUM *terreſtre* radice annua, foliis pinnatifidis dentato-ſerratis, ſiliquis fœcundis.

RADIX annua, fibroſa, albida.	ROOT annual, fibrous and whitiſh.
CAULIS pedalis, ſeſquipedalis, et ultra, plerumque erectus, ramoſus, ſulcatus, lævis, viridis, ſeu purpuraſcens.	STALK a foot, a foot and a half, or more, in height, generally upright, branched, grooved, ſmooth, of a green or purpliſh colour.
FOLIA omnia pinnatifida, Eryſimi officinalis quodammodo ſimilia, lævia, pinnis trium, quatuor, ſive ſex parium, cum impari, omnibus inæqualiter dentato ſerratis, extima preſertim in inferioribus foliis rotundata; caulina ſemiamplexicaulia.	LEAVES, all of them pinnatifid, ſomewhat like thoſe of Hedge-muſtard, ſmooth, the pinnæ conſiſt of three, four, or ſix pair, with an odd one, all of them unequally indented, the outermoſt eſpecially in the bottom leaves roundiſh, thoſe of the ſtalk partly amplexicaule.
FLORES minimi, lutei, ſemper fœcundi.	FLOWERS very ſmall, yellow, and always producing ſeed.
CALYX: Perianthium tetraphyllum, foliolis ovatis, obtuſis, concavis, ſuberectis, flaveſcentibus. *fig.* 1. auct.	CALYX: a Perianthium of four leaves, which are ovate, obtuſe; hollow, nearly upright, and yellowiſh. *fig.* 1. magn.
COROLLA; Petala quatuor, lutea, ſæpius emarginata, vix longitudine calycis. *fig.* 2.	COROLLA: four Petals, of a yellow colour, generally nicked at the end, ſcarcely the length of the calyx. *fig.* 2.
STAMINA: Filamenta ſex, ſubæqualia, longitudine piſtilli, flaveſcentia. Antheræ luteæ, incumbentes. *fig.* 3.	STAMINA: ſix Filaments, nearly equal, the length of the piſtillum, of a yellowiſh colour. Antheræ yellow and incumbent. *fig.* 3.
PISTILLUM: Germen oblongum. Stylus breviſſimus. Stigma capitatum, villoſum. *fig.* 4.	PISTILLUM: Germen oblong. Style very ſhort. Stigma forming a little head and villous. *fig.* 4.
PERICARPIUM: Siliqua teres, longitudine pedunculi, ſurſum ſubarcuata, ſeminibus plurimis haud æqualiter protuberantibus turgida. *fig.* 5, 6.	SEED-VESSEL a round Pod, the length of the flower-ſtalk, ſomewhat curved upward, turgid with numerous ſeeds which protuberate unequally. *fig.* 5, 6.
SEMINA minima, fuſca, *fig.* 7.	SEEDS very ſmall and brown. *fig.* 7.

We have taken the name of *terreſtre*, which Linnæus applies to the third variety of his *Siſymbrium amphibium*, not ſo much from the certainty of its being the plant he intends, as from the propriety of its application to this ſpecies, it being generally found in dryer ſituations than the true *amphibium*.

Repeated obſervation and culture have thoroughly ſatisfied us that the preſent plant is a ſpecies perfectly diſtinct from the *amphibium*; and we ground our authority for conſidering it as ſuch on the following circumſtances.

1ſt, It is an annual, whereas the *amphibium* is not only a perennial, but has a creeping root.

2dly, It is a much ſmaller plant than the *amphibium*, ſeldom acquiring half its height.

3dly, It is ſeldom or never found in the water, unleſs accidentally overflown.

4thly, Its foliage is very different, the radical leaves much reſembling thoſe of the *Eryſimum officinale*.

And, laſtly, its ſeed veſſels are always turgid, and full of ſeeds, while thoſe of the *amphibium* are uſually abortive.

As we can find no ſatisfactory account of this plant either in Ray, Hudson, Linnæus, Haller, or the numerous authors we have conſulted, we have omitted all ſynonyms, and contented ourſelves with giving it a new ſpecific character, chiefly intended to contraſt it with the *amphibium*.

In the courſe of our botanical-reſearches we have had frequent occaſion to remark, that our moſt common plants are the leaſt known; we ſeek with avidity ſuch as are rare and with difficulty acquired, and neglect thoſe that we daily tread under foot. The preſent plant affords an inſtance of this inattention, as it is a very common one in the environs of *London*, and found in the ſame ſituations as the *Rumex maritimus*, on the edges of wet ditches, and on ground apt to be occaſionally overflown. We have obſerved it in *Tothill-Fields*, on the edge of a ditch by the road-ſide leading from the *Magdalen Hoſpital* to *Lambeth Marſh*, and in our garden it comes up ſpontaneouſly as a common weed.

When this plant grows by itſelf, in a ſituation tolerably dry, it grows quite erect, and quickly produces a conſiderable quantity of ſeeds. Should it happen to be overflown, which is frequently the caſe, it is then more procumbent, and will ſometimes take root at the joints, in which ſtate it appears to be the *Siſymbrium paluſtre repens parvo flore* of Vaillant, at leaſt it accords in part.

This ſpecies of Siſymbrium flowers in *June*, *July*, *Auguſt*, and *September*.

It has a ſimilar taſte to moſt of the plants of the creſs kind, but is not very pungent.

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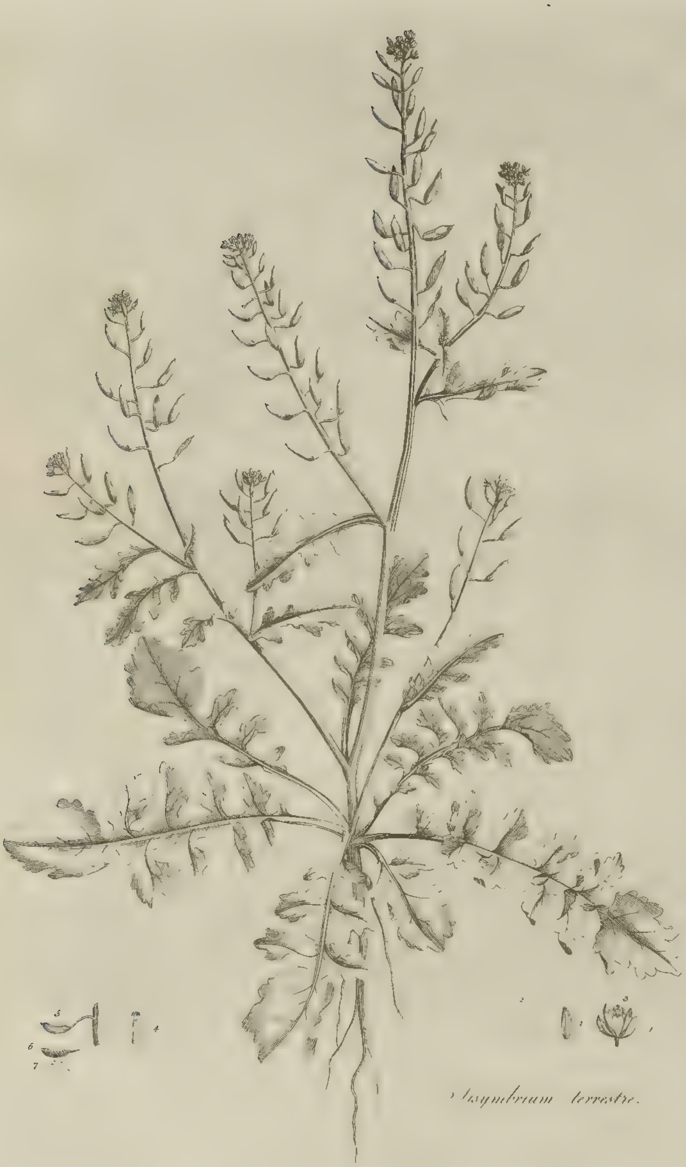


Sisymbrium terrestre.

ERYSIMUM OFFICINALE. HEDGE MUSTARD.

ERYSIMUM *Lin. Gen. Pl.* TETRADYNAMIA SILIQUOSA.

Siliqua columnaris, exacte tetraëdra, *Cal.* clauſus.

Raii Syn. Gen. 21. HERBÆ TETRAPETALÆ SILIQUOSÆ ET SILICULOSÆ.

ERYSIMUM *officinale* ſiliquis ſpicæ adpreſſis. *Lin. Syſt. Vegetab. p.* 499. *Sp. Pl. p.* 922. *Fl. Suec. n.* 598.

ERYSIMUM foliis pinnatis, pinnis rectangulis, acutis, extrema triangulari maxima, ſiliquis adpreſſis. *Haller. Hiſt.* 878.

SISYMBRIUM *officinale. Scopoli Fl. Carn. n.* 824.

ERYSIMUM vulgare. *Bauh. Pin.* 100.

ERYSIMUM Dioſcoridis Lobelio. *Ger. em.* 254.

ERYSIMUM vulgare. *Parkinſ.* 833.

ERUCA hirſuta ſiliqua caule appreſſa Eryſimum dicta. *Raii Syn.* 298. Common Hedge-muſtard. *Hudſon. Fl. Angl. ed.* 2. *p.* 286. *Lightfoot Fl. Scot. p.* 354.

RADIX annua, deſcendens, flexuoſa, fibrilloſa.	ROOT annual, deſcending, crooked, and fibrous.
CAULIS pedalis ad bipedalem, erectus, teres, ſtriatus, pubeſcens, ſcaber, ramoſus, ſæpius purpuraſcens.	STALK from one to two feet high, upright, round, finely grooved, beſet with numerous ſhort rough hairs, branched, and for the moſt part purpliſh.
FOLIA alterna, petiolata, utrinque parcius pubeſcentia, ſubtus ſcabra, præcipue in coſta et nervis, pinnatifida, laciniis oppoſitis, oblongis, ſerrato-dentatis, terminali majore, cum laciniis proximis confluente.	LEAVES alternate, ſtanding on foot-ſtalks, ſlightly downy on each ſide, particularly on the mid-rib and nerves, pinnatifid, the ſegments oppoſite, oblong, ſerrated or toothed, the end one largeſt, and connected with the next to it.
RACEMI florum terminales, ſubrotundi; fructuum filiformes, elongati, nudi, pubeſcentes.	RACEMI of the flowers terminal, roundiſh; of the fruit filiform, lengthened out, naked, and downy.
CALYX: PERIANTHIUM tetraphyllum, pallidum, foliolis lineari ovalibus, obtuſiuſculis, concavis, pubeſcentibus, *fig.* 1.	CALYX: a PERIANTHIUM of four leaves, of a pale colour, linear-oval, bluntiſh, concave, and downy, *fig.* 1.
COROLLA cruciformis, tetrapetala, ſordide luteſcens, petalis cuneiformibus, obtuſis, venuloſis, unguiculatis, calyce longioribus, *fig.* 4.	COROLLA croſs-ſhaped, compoſed of four petals, of a dull yellow colour, wedge-ſhaped, obtuſe, veiny, clawed, longer than the calyx, *fig.* 4.
STAMINA: FILAMENTA ſex, ſubulata, pallida, corollâ paulo breviora; quorum duo adhuc breviora. ANTHERÆ cordatæ, acutæ, ſubrecurvæ, *fig.* 2.	STAMINA: ſix FILAMENTS, tapering, of a pale colour, a little ſhorter than the corolla; two of which are ſhorter than the reſt. ANTHERÆ heart-ſhaped, pointed, bent ſomewhat upward, *fig.* 2.
NECTARIA: *Glandulæ* duæ utrinque ad ſtamina breviora.	NECTARIES: two *Glands* one on each ſide, placed at the baſe of the ſhorter ſtamina.
PISTILLUM: GERMEN cylindricum, ſtriatum. STYLUS brevis, pubeſcens. STIGMA orbiculatum, planiuſculum, emarginatum, altitudine fere ſtaminum, *fig.* 3.	PISTILLUM: GERMEN cylindrical, ſtriated. STYLE ſhort, downy. STIGMATA round, flattiſh, emarginate, almoſt the height of the ſtamina, *fig.* 3.
SILIQUÆ cylindricæ, ſtriatæ, virides aut purpureæ, pubeſcentes, cauli adpreſſæ, *fig.* 5, 6.	PODS cylindrical, finely grooved, green or purple, downy and preſſed to the ſtalk, *fig.* 5, 6.
SEMINA ſordide luteſcentia, utrinque oblique truncata, *fig.* 7.	SEEDS of a dingy yellow colour, obliquely truncated at each end, *fig.* 7.

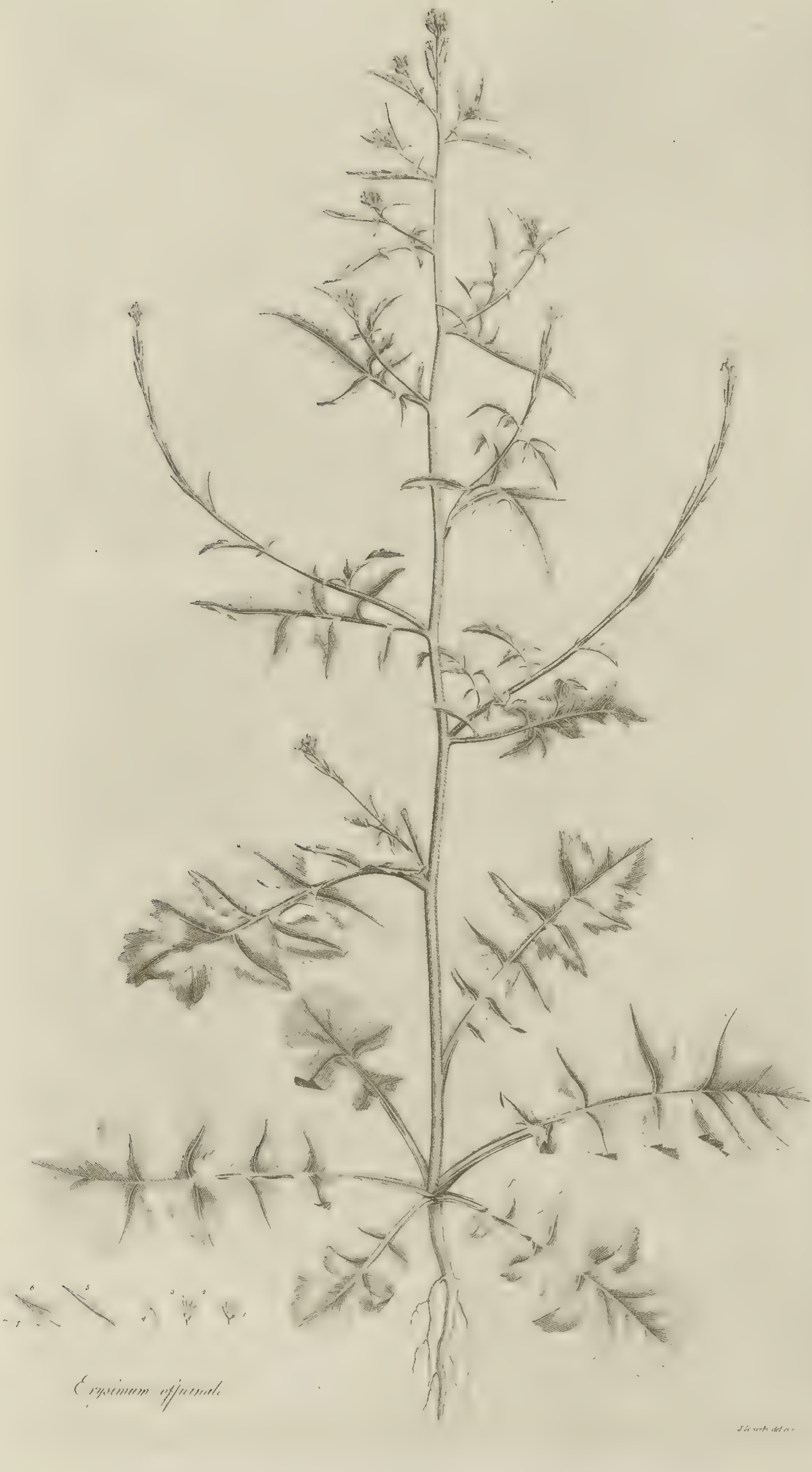
The *Eryſimum officinale* affords a remarkable inſtance of that diverſity of appearance which the ſame plant may aſſume at different periods of its growth. View it juſt as it comes into bloſſom, and afterwards, when its flowering branches ſhoot out horizontally to a great length, and you will ſcarcely believe that it is one and the ſame plant.

It grows very commonly on dry banks, under walls, pales, and in waſte places; and flowers from June to September.

The leaves of Hedge Muſtard are ſaid to be attenuant, expectorant, and diuretic, and ſtand particularly recommended againſt chronical coughs and hoarſeneſs, whether humoural or occaſioned by immoderate exertion of the voice. LOBEL greatly commends for this purpoſe a compound ſyrup, which, as GEOFFROY obſerves, is not ſuperior to a ſimple mixture of the expreſſed juice of the herb with honey; and indeed it is not very clear, whether the virtue of the honey is much improved by the Eryſimum.

The herb has no ſmell; and its taſte, at leaſt when moderately dried, is little other than herbaceous, with ſomewhat of a ſlight ſaline impregnation.

The ſeeds of Eryſimum are conſiderably pungent, and appear to be nearly of the ſame quality with thoſe of muſtard, but weaker. Their acrimony, like that of muſtard-ſeed is extracted totally by water, and partially by rectified ſpirit, and ſtrongly impregnates water in diſtillation. *Aikin's Ed. of Lewis's Mat. Med. p.* 290.



Erysimum officinale.

J. Sowerby del. et sc.

Lathyrus Aphaca.

Lathyrus Aphaca. Yellow Vetchling.

LATHYRUS *Lin. Gen. Pl.* Diadelphia Decandria.

Stylus planus, ſupra villoſus, ſuperne latior. *Cal.* laciniæ ſuperiores 2 breviores.

Raii Syn. Gen. 23. Herbæ flore papilionaceo seu leguminosæ.

LATHYRUS *Aphaca* pedunculis unifloris, cirrhis aphyllis, ſtipulis ſagittato-cordatis. *Lin. Syſt. Vegetab. p.* 662. *Sp. Pl.* 1029.

LATHYRUS aphyllos ſtipulis ſagittatis latiſſimis. *Haller hiſt. n.* 442.

LATHYRUS *Aphaca. Scopoli Fl. Carn. n.* 887.

VICIA lutea foliis convolvuli minoris. *Bauh. Pin.* 345.

APHACA *Parkinſ.* 1067. *Ger. emac.* 1250. *Raii Syn. ed.* 3. *p.* 320. *Hudſon Fl. Angl. ed.* 2. *p.* 315.

RADIX annua, fibroſa.

CAULIS pedalis, ſeſquipedalis, et ultra, debilis, ope cirrhorum ſcandens, tetragonus, lævis.

FOLIA nulla.

STIPULÆ binæ, magnæ, ſagittato-cordatæ, obtuſæ, utrinque prope baſin denticulo notatæ, glaucæ, ſubtus nervoſæ.

CIRRHUS ſimplex, patens.

FLORES lutei, parvi, ſolitarii, pedunculati, axillares.

PEDUNCULI foliis longiores, tetragoni, uniflori, bractæâ minimâ prope florem inſtructi.

CALYX: Perianthium monophyllum, quinque partitum, laciniis lanceolatis, ſubæqualibus, nervoſis, longitudine fere corollæ, *fig.* 1.

COROLLA papilionacea, Vexillum luteum, reflexum, intus lineis cæruleis ſtriatum, *fig.* 2. Alæ luteæ, ſubrotundæ, longitudine carinæ, hamis duobus inæqualibus, pallidioribus, *fig.* 3. Carina pallide ſulphurea, poſtice fiſſa, *fig.* 4.

STAMINA: Filamenta decem, ſimplex, et novem fidum, aſſurgentia, albida, Antheræ ſubrotundæ, luteæ, *fig.* 5.

PISTILLUM Germen oblongum, compreſſum, viride, glabrum; Stylus ſurſum erectus, pallidior, ſuperne latior, obtuſus; Stigma a medietate ſtyli antice villoſus, *fig.* 6.

PERICARPIUM: Legumen unciale, latiuſculum, compreſſum.

SEMINA ſeptem octave, ſubrotunda, nitida.

ROOT annual, and fibrous.

STALK a foot, a foot and a half or more in height, weak, climbing by means of its tendrils, four-cornered, and ſmooth.

LEAVES none.

STIPULÆ growing in pairs, large, betwixt arrow and heart-ſhaped, obtuſe, on each ſide near the baſe furniſhed with a tooth, glaucous, and ribbed on the underſide.

TENDRIL ſimple and ſpreading.

FLOWERS yellow, ſmall, ſolitary, growing on footſtalks from the alæ of the leaves.

FLOWER-STALKS longer than the leaves, four-cornered, one-flowered, furniſhed near the flower with a minute bractæa or floral leaf.

CALYX: a Perianthium of one leaf, deeply divided into five ſegments, which are lanceolate, nearly equal, ribbed, and almoſt the length of the corolla, *fig.* 1.

COROLLA papilionaceous, Standard yellow, reflexed, ſtriped on the inſide with blue lines, *fig.* 2. Wings yellow, nearly round, the length of the keel, claws two, unequal, paler, *fig.* 3. Keel of a pale ſulphur colour, cloven behind, *fig.* 4.

STAMINA: ten Filaments, one ſingle, nine connected, riſing upwards, whitiſh; Antheræ roundiſh and yellow, *fig.* 5.

PISTILLUM Germen oblong, flat, green, and ſmooth, Style riſing upwards, upright, paler, dilated above, obtuſe; Stigma which riſes from the middle of the ſtyle villous on its fore part, *fig.* 6.

SEED-VESSEL: a Pod about an inch in length, broadiſh, and flattened.

SEEDS ſeven or eight, roundiſh, and ſhining.

We have here a very unuſual phenomenon in the vegetable œconomy, a plant whoſe ſtipulæ ſupply the place of leaves, at leaſt when the plant becomes of a certain age; for, by a kind of accidental examination, we lately diſcovered that this ſpecies of Lathyrus, ſoon after it comes up from ſeed, is uſually furniſhed with one or more pair of leaves, ſimilar to the other plants of this family, but which, as the plant advances, totally diſappear; theſe are repreſented at *fig.* 7.

A ſomewhat ſimilar appearance we noticed laſt ſummer at Mr. Malcolm's, *Kennington*, in a rare ſpecies of *Mimoſa*, called *verticillata*, all the leaves of the young plants were pinnated, and all thoſe of the old plants whorled.

Linnæus, in his *Species Plant.* takes ſome notice of the Aphaca's producing leaves; his words are, *Cirrhus interdum aliquis gerit foliola conjugata,* 2, *lanceolata, reliquis Lathyris ſimillima at hoc rariſſime.*

According to our obſervation, the leaves grew on footſtalks in the uſual way, without any, or a very ſhort tendril, and they were obſervable on every ſeedling; hence we ſuſpect them to be common to this plant when young; and rare, merely from being overlooked.

This ſpecies is an annual which grows ſpontaneouſly in our corn fields, but is not common in the neighbourhood of London; we have obſerved it moſt frequently about Tottenham and Enfield.

It flowers in June and July.

No particular uſes or noxious qualities are aſcribed to it.

Spartium
Scoparium

SPARTIUM SCOPARIUM. COMMON BROOM.

SPARTIUM *Lin. Gen. Pl.* DIADELPHIA DECANDRIA.

Stigma longitudinale, ſupra villoſum. *Filamenta* germini adhærentia. *Cal.* deorſum productus.

Raii Syn. ARBORES ET FRUTICES.

SPARTIUM *Scoparium* foliis ternatis ſolitariiſque ramis inermibus angulatis. *Lin. Syſt. Vegetab. p.* 644. *Sp. Pl. p.* 996. *Fl. Suec. n.* 633.

SPARTIUM foliis inferioribus ternatis hirſutis, ſuperioribus ſimplicibus. *Haller hiſt. n.* 354.

GENISTA angulosa et ſcoparia. *Bauh. pin.* 395.

GENISTA cum rapo. *Dodon. Pempt. p.* 761. *Ger. emac.* 1311.

GENISTA vulgaris ſive ſcoparia. *Park. Theat. p.* 228.

GENISTA anguloſa trifolia. *I. B.* I. 388. *Raii Syn. p.* 474. Common Broom. *Hudſon Fl. Angl. ed.* 2. *p.* 310. *Lightfoot Fl. Scot. p.* 382.

Frutex tripedalis ad orgyalem et ultra, ramoſiſſimus, ramis erectis, virgatis, viridibus, angulatis, flexilibus, junioribus pubeſcentibus	A Shrub from three to ſix feet high or more, very much branched, the branches upright, twiggy, green, angular, flexible, the young ones downy.
FOLIA ſæpius ternata, ſummis ſubinde ſolitariis, foliolis ovatis, acutis, pubeſcentibus, ciliatis, ciliis mollibus inflexis.	LEAVES moſt commonly growing by threes, uppermoſt ones ſometimes ſingly, leaflets ovate, acute, downy, edged with ſoft hairs bending inwards.
PETIOLI pubeſcentes, complanati.	LEAF-STALKS downy, flattened.
FLORES lutei, maximi, laxe racemoſi.	FLOWERS yellow, very large, growing in looſe racemi.
BRACTEÆ quatuor, obovatæ, inæquales, cruciatæ, obtuſæ, ad baſin pedunculorum.	BRACTEÆ four, inverſely ovate, unequal, croſs-ſhaped, obtuſe at the baſe of the flower-ſtalks.
PEDUNCULI ſolitarii, ſæpius bini, raro terni, teretes, glabri, ſtipulâ minimâ utrinque inſtructi.	FLOWER-STALKS ſingle, oftener two, rarely three, round, ſmooth, furniſhed on each ſide with a very minute ſtipula.
CALYX: PERIANTHIUM monophyllum, parvum, bilabiatum, ſæpe purpureum, obſolete denticulatum, labiorum apicibus marcidis fuſcis, *fig.* 1.	CALYX: a PERIANTHIUM of one leaf, ſmall, two-lipped, often purple, faintly toothed, extremities of the lips withered and brown, *fig.* 1.
COROLLA papilionacea, pentapetala, *Vexillum* obcordatum, reflexum, maximum, *fig.* 2. *Alæ* longitudine carinæ, ſubovales, breviter petiolatæ, *fig.* 3. *Carina* ampla et profunda, obtuſe roſtrata, *fig.* 4. dipetala, aut in duas partes facile ſeparabilis, margine carinali villis connexo.	COROLLA papilionaceous, pentapetalous, *Standard* inverſely heart-ſhaped, reflexed, very large, *fig.* 2. *Wings* the length of the keel, ſomewhat oval, on ſhort footſtalks, *fig.* 3. *Keel* large and deep, beak blunt, *fig.* 4. compoſed of two petals, or at leaſt eaſily ſeparated into two parts, the edges being connected together at the keel with ſoft hairs.
STAMINA: FILAMENTA decem, inferne in unum corpus coalita (hinc decandria non diadelphia) aſſurgentes, inferioribus longioribus; ANTHERÆ oblongæ, crocæ, *fig.* 5.	STAMINA: ten FILAMENTS, below united into one body (hence of the claſs decandria rather than diadelphia) riſing upwards, the lowermoſt ones longeſt; ANTHERÆ oblong, ſaffron-coloured, *fig.* 5.
PISTILLUM: GERMEN oblongum, hirſutum; STYLUS ſubulatus, aſſurgens, demum ſpiraliter involutus ad apicem inferne canaliculatus, STIGMA terminale, minimum, capitatum, *fig.* 6. auct. *fig.* 7.	PISTILLUM: GERMEN oblong, hirſute; STYLE tapering, riſing upward, finally bent ſpirally, ſo as to form ſomewhat more than a circle, near the tip hollowed below; STIGMA terminal, very ſmall, and forming a little head, *fig.* 6. magnified, *fig.* 7.
PERICARPIUM: LEGUMEN latum, compreſſum, nigricans, marginibus pilis mollibus ciliatis, *fig.* 8.	SEED-VESSEL a broad, flat, blackiſh POD, edged with ſoft hairs, *fig.* 8.
SEMINA plurima ad 20, minuta, ſubovata, luteſcentia, nitida, *fig.* 9.	SEEDS numerous to 20, ſmall, ſomewhat ovate, dingy yellow, gloſſy, *fig.* 9.

The common Engliſh Broom is one of the moſt ornamental ſhrubs we have, eſpecially that variety of it, in which the calyx is purple, and the bloſſoms ſtrongly tinged with orange; but even in its common ſtate, ſuch is the profuſion of bloſſoms with which its branches are loaded in the ſummer, ſuch the charming verdure of its twigs in the winter ſeaſon, that it may be ſaid to vie with any of the foreign ones, and to be equally deſerving a place in all ornamental grounds.

It grows naturally in dry, ſandy, barren ſoils, bears tranſplanting badly, but is moſt readily raiſed from ſeed.

It is not only in an ornamental point of view, that this plant deſerves our notice, it claims our attention alſo as an uſeful plant in rural œconomy and medicine.

Though not ſo commonly uſed for beſoms as the common Heath and Birch, it is preferred for many purpoſes; in the Northern parts of Great-Britain it is made uſe of for thatching cottages, corn and hay-ricks, alſo as a ſubſtitute for reeds in making fences or ſcreens; and we have been credibly informed, that in ſome parts of Scotland, where coals are ſcarce, whole fields are ſown with its ſeeds to form fuel.

Authors mention the flower-buds, juſt before they become yellow, as proper for pickling, in the manner of capers *; the branches, as capable of tanning leather †, and of being manufactured into coarſe cloth ‡; the old wood, as furniſhing the cabinet-maker with the moſt beautiful materials for vaneering; and the tender branches, to be frequently mixed with hops for brewing §.

* DODON, &c. † HALLER. ‡ Ibid. § LIGHTFOOT, Fl. Scot.

The twigs, when bruiſed, ſmell diſagreeably; this may, perhaps, be one reaſon for their being generally rejected by cattle: the plant, however, affords nouriſhment to a great variety of inſects; in particular, to the larvæ of ſeveral *Phalænæ* not deſcribed by LINNÆUS.

From the roots of this plant ſprings the Broom Rape, figured in a former number of this work.

" The leaves and ſtalks of broom have a nauſeous bitter taſte, which they give out by infuſion, both to " water and rectified ſpirit; and which, on gently inſpiſſating the filtred liquors, remains concentrated in the " extracts: the watery tincture is of a yellowiſh green or browniſh, the ſpirituous of a dark green colour. " They are accounted laxative, aperient, and diuretic; and in this intention have been often uſed by the " common people in dropſies and other ſerous diſorders. Dr. MEAD relates a caſe of an hydropic perſon, " who, after the paracenteſis had been thrice performed, and ſundry purgatives and diuretics had been tried " without relief, was perfectly cured, by taking, every morning and evening, half a pint of a decoction of " green broom tops, with a ſpoonful of whole muſtard ſeed: by this medicine, the thirſt was abated, the " belly looſened, and the urinary diſcharge increaſed to the quantity of at leaſt five or ſix pints a day.

" Infuſions of the aſhes of the plant in acidulous wines, have likewiſe been employed in the ſame intention, " and often with good ſucceſs. The virtue of this medicine does not depend, as ſome have ſuppoſed, on " any of the peculiar qualities of the broom remaining in the aſhes, but on the alkaline ſalt and earth, which " are the ſame in the aſhes of broom as in thoſe of other vegetables, combined, wholly or in part, with the " vinous acid. A ſolution even of the pure earthy part of vegetable aſhes, made in vegetable acids, proves " notably purgative and diuretic.

" Of the ſeeds and flowers, the medicinal qualities are not well known. It is ſaid, that the ſeeds, in " doſes of a dram and a half in ſubſtance, and five or ſix drams in decoction or infuſion, prove purgative or " emetic. Some report that the flowers alſo operate in the ſame manner; but LOBEL aſſures us, from his " own obſervation, that they have been taken in quantity without producing any ſuch effect: and I have " known infuſions of the flowery tops drank freely in ſome aſthmatic caſes, without any other ſenſible operation " than a ſalutary increaſe of urine and expectoration. The ſeeds, ſlightly roaſted, are uſed in ſome places as " coffee." LEWIS's *Mater. Med. p.* 318.

A variety of this plant, much more hoary than common, is accidentally met with; the moſt uſual time of its flowering with us, is about the latter end of May or beginning of June.

THOMSON, whoſe obſerving eye rarely ſuffered any of the beauties of nature to eſcape him, has noticed the flowering of this ſhrub in the following paſſage, in which he deſcribes the effect which the genial warmth of the ſeaſon produces on the various animals:

" While thus the gentle tenants of the ſhade
" Indulge their purer loves, the rougher world
" Of brutes below ruſh furious into flame
" And fierce deſire. Thro' all his luſty veins
" The bull deep-ſcorch'd, the raging paſſion feels;
" Of paſture ſick, and negligent of food,
" Scarce ſeen, he wades among the yellow broom.

Trifolium procumbens. Procumbent Trefoil.

TRIFOLIUM *Lin. Gen. Pl.* Diadelphia Decandria.

Flores ſubcapitati. *Legumen* vix calyce longius, non dehiſcens, deciduum.

Raii Syn. Gen. 24. Herbæ flore papilionaceo seu leguminosæ.

TRIFOLIUM *procumbens* ſpicis ovalibus imbricatis: vexillis deflexis perſiſtentibus, caulibus procumbentibus. *Linnæi Syſt. Veg. p.* 574. *Sp. Pl* 1088. *Fl. Suec. n.* 673.

TRIFOLIUM ſpicis ſtrepentibus paucifloris, caulibus erectis. *Haller hiſt.* 364.

TRIFOLIUM luteum flore lupulino minus. *I. B.* II. 381.

TRIFOLIUM lupulinum alterum minus. *Raii Syn. p.* 330. *a.* 17. The leſſer Hop-Trefoil. *Hudſon. Fl. Angl. ed.* 2. *p.* 328. *Lightfoot Flor. Scot. p.* 409.

RADIX annua, fibroſa.	ROOT annual and fibrous.
CAULES plures, ſpithamæi, pedales et ultra, teretes, duriuſculi, pilis adpreſſis pubeſcentes, præſeitim ad extremitates, purpurei, procumbentes, ramoſi.	STALKS ſeveral, a ſpan, or even a foot or more in length, round, hardiſh, downy, with hairs preſſed cloſe to the ſtalk, particularly at the extremities, purple, procumbent, and branched.
FOLIA terna, petiolata, remota, inferiora obcordata, ſuperiora obovata, plerumque emarginata, ad apicem argute ſerrata, plerumque lævia, venis rectis, ſimplicibus, utrinque impreſſis.	LEAVES growing three together, remotely, ſtanding on foot-ſtalks, the lowermoſt obcordate, the uppermoſt obovate, for the moſt part emarginate, towards the top finely ſerrated, commonly ſmooth, the veins ſtraight, unbranched, impreſſed on each ſide of the leaf.
PETIOLI breves, longitudine ſtipularum.	LEAF-STALKS ſhort, the length of the ſtipulæ.
STIPULÆ binæ, ovatæ, acutæ, quinquenerves, ad margines piloſæ, baſi amplexicaules.	STIPULÆ growing in pairs, ovate, pointed, five-ribbed, edged with hairs, and at the baſe embracing the ſtalk.
PEDUNCULI unciales circiter, pubeſcentes.	FLOWER-STALKS about an inch in length and downy.
SPICÆ ſubrotundæ, multifloræ (raro infra octo, aut ultra viginti) laxius imbricatæ.	SPIKES roundiſh, many flowered, flowers ſeldom fewer than eight or more than twenty, looſely imbricated.
FLORES parvi, lutei, pedicellis breviſſimis, inſidentes.	FLOWERS ſmall and yellow, ſitting on very ſhort foot-ſtalks.
CALYX: Perianthium quinquedentatum, perſiſtens, ſubpiloſum, dentibus tribus inferioribus longioribus, ſubulatis, *fig.* 1.	CALYX: a Perianthium with five teeth, permanent, and ſomewhat hairy, the three lowermoſt longer than the reſt, and awl-ſhaped, *fig.* 1.
COROLLA papilionacea, perſiſtens, marceſcens, demum rufa, venis ſaturatioribus ſtriata, *fig.* 2.	COROLLA papilionaceous, permanent, and withering, finally becoming of a reddiſh brown colour, and ſtriped with veins of a deeper colour, *fig.* 2.
PERICARPIUM: Legumen ovatum, compreſſum, monoſpermum, deorſum reflexum, corollâ perſiſtente incluſum, *fig.* 3.	SEED-VESSEL an ovate, flat Pod, turning backward, incloſed in the corolla, which continues, and containing one ſeed, *fig.* 3.

The *Trifolium procumbens* is often found larger, but more frequently much ſmaller, than the ſpecimen we have here figured. When it grows luxuriantly it bears a near reſemblance to the *agrarium* already publiſhed; but in that ſpecies the ſpikes are not only much larger, but alſo much more cloſely imbricated, compared with the *procumbens* the *agrarium* may be conſidered with us at leaſt as a ſcarce plant; while that is found only in certain ſpots, the *procumbens* is met with every where, there being ſcarcely a dry, hilly paſture, or graſs plat, on which it may not be found. In its dwarf ſtate it comes very near to the *filiforme* figured in *Ray's Synopſis*, *tab.* 14. *fig.* 4. Indeed it is very difficult to aſſign their reſpective limits; but both Mr. Hudson and Mr. Lightfoot agree in making the *filiforme* a diſtinct ſpecies; and the latter aſſures us, that culture proves them to be ſpecifically different.

All the Trefoils are conſidered as affording excellent paſturage and fodder for cattle. The preſent ſpecies is, perhaps, not inferior to any of them in theſe reſpects; but the quantity it affords is ſo trifling, that it can ſcarcely be thought worth cultivating, eſpecially as it is only an annual.

It flowers during the greateſt part of the ſummer.

Haller deſcribes it as growing upright, which it never does with us, unleſs drawn up by ſurrounding herbage.

Apium procumbens

VICIA CRACCA. TUFTED VETCH.

VICIA *Lin. Gen. Pl.* Diadelphia Decandria.

Stigma latere inferiore tranſverſe barbatum.

Raii Syn. Gen. 23. Herbæ flore papilionaceo seu leguminosæ.

VICIA *Cracca* pedunculis multifloris, floribus imbricatis, foliolis lanceolatis pubeſcentibus, ſtipulis integris. *Lin. Syſt. Vegetab. p.* 553. *Sp. Pl. p.* 1035. *Fl. Suec. n.* 652.

VICIA foliis lanceolatis ſericeis, racemis multifloris reflexis, ſtipulis integerrimis. *Haller. Hiſt. n.* 424.

VICIA *Cracca*. *Scopoli Fl. Carn. n.* 899.

VICIA multiflora. *Bauh. Pin.* 345.

VICIA multiflora ſeu ſpicata. *Park.* 1072.

CRACCA. *Riv. Tetr.* 49. *Raii Syn. p.* 322. Tufted Vetches. *Hudſon. Fl. Angl. p.* 317. *Lightfoot Fl. Scot. p.* 394.

RADIX perennis, repens.	ROOT perennial and creeping.
CAULIS bipedalis, tripedalis et ultra, pro ratione loci, ſcandens, anguloſo-ſulcatus, pubeſcens, fragilis, frangendo crepitans, ramoſus.	STALK two, three feet or more in height, according to its place of growth, climbing, angular, grooved, downy, brittle, ſnapping when broken, branched.
STIPULÆ binæ, ſemiſagittatæ, integræ aut dentatæ.	STIPULÆ growing in pairs, each reſembling half an arrow, entire, or toothed.
FOLIA pinnata, pinnarum 8 ſeu 12 parium, raro ultra, oblongo-lanceolata, mucronata, utrinque ſericea pube albida, pinnis oppoſitis alterniſve, cirrho tripartito terminata.	LEAVES pinnated, compoſed of 8 or 12 pair, ſeldom more, oblong, lanceolate, terminated by a point, covered on each ſide with a kind of white ſilky down, the pinnæ oppoſite or alternate, terminated by a tripartite cirrhus.
FLORES racemoſi.	FLOWERS growing in bunches or racemi.
RACEMI alterni, multiflori, primo ſubereƈti, apice incurvi, poſtea reflexi, floſculis 10 ad 40, violaceis, confertis, breviſſime pedicellatis.	RACEMI alternate, many-flowered, at firſt nearly upright, with the tip bent in, aftewards reflexed, flowers from 10 to 40, of a violet colour, crouded together, and ſtanding on very ſhort foot-ſtalks.
CALYX: Perianthium monophyllum, tubulatum, coloratum, quinquedentatum, dentibus tribus inferioribus longioribus, piloſis, medio produƈtiore, duobus ſuperioribus minimis, *fig.* 2.	CALYX: a Perianthium of one leaf, tubular, coloured, having five teeth, the three lowermoſt longer than the upper ones, the middle one fartheſt extended, the two upper ones very minute, *fig.* 2.
COROLLA: Vexillum emarginatum, reflexum, violaceum, venis ſaturatioribus obſolete ſtriatum. Alæ conniventes. Carina albida, ad apicem maculâ ſaturate violaceâ, utrinque notatum, *fig.* 1.	COROLLA: Standard emarginate, reflexed, of a violet colour, faintly ſtriped with veins of a deeper colour. Wings cloſing. Keel whitiſh, marked on each ſide at the tip with a deeply violet-coloured ſpot, *fig.* 1.
STAMINA: Filamenta 10, ſimplex et novem fidum, alba. Antheræ parvæ, luteæ.	STAMINA: ten Filaments, nine united, one ſingle, white. Antheræ ſmall and yellow.
GERMEN oblongum, compreſſum, glabrum. Stylus ſubereƈtus, undique piloſus. Stigma obtuſum, *fig.* 3.	GERMEN oblong, compreſſed, ſmooth. Style nearly upright, hairy all round. Stigma blunt, *fig.* 3.
PERICARPIUM: Legumen ſemunciale, pallide fuſcum, glabrum, utrinque compreſſum, *fig.* 4.	SEED-VESSEL: a Pod about half an inch long, of a pale brown colour, flattened on each ſide, *fig.* 4.
SEMINA quatuor vel quinque in ſingulo legumine ſubrotunda, nigricantia, *fig.* 5.	SEEDS four or five in each pod, nearly round and blackiſh, *fig.* 5.

Linnæus, Haller, and Scopoli, aſcribe to this plant *ſtipulæ integræ*. Indeed the two former found a part of their ſpecific character on this very circumſtance; but this character is certainly a very fallacious one, as the plant is frequently found with us having *ſtipulæ dentatæ*, and ſuch is the ſpecimen we have figured. It has, however, other characters by which it is obviouſly diſtinguiſhed. The moſt ſtriking are drawn from the leaves and flowers: the former are covered with a fine kind of ſilky down, which gives them a manifeſt whiteneſs. This is moſt apparent in ſuch ſpecimens as grow in dry, expoſed ſituations. The flowers are of a rich deep purple colour, grow in long bunches or racemi, thickly crouded together, and are conſpicuous at a diſtance.

It is a very common plant in the neighbourhood of London, and no where more plentiful than in Baterſea Meadows. When it has an opportunity of climbing up a hedge, it will grow to the height of five or ſix feet; and it is then that its bloſſoms are diſplayed to advantage. In the open paſtures and fields, it is found much more dwarfiſh.

It flowers from July to September.

Gentlemen who wiſh to decorate the hedges of their plantations cannot ſelect a more proper plant, as it is not apt, like the great Bindweed, Travellers-joy, and other ſtrong growing plants, to ſuffocate the ſhrubs which ſupport it.

It is recommended alſo, by ſome authors, as affording excellent fodder for cattle.

Vicia Cracca.

7

Crepis tectorum

CREPIS TECTORUM. SMOOTH SUCCORY-HAWKWEED.

CREPIS *Lin. Gen. Pl.* SYNGENESIA POLYGAMIA ÆQUALIS.

Recept. nudum. *Cal.* calyculatus, ſquamis deciduis. *Pappus* plumoſus, ſtipitatus.

Raii Syn. Gen. 6. HERBÆ FLORE COMPOSITO, NATURA PLENO LACTESCENTES.

CREPIS *tectorum* foliis lanceolato-runcinatis ſeſſilibus lævibus, inferioribus dentatis. *Lin. Syſt. Vegetab. p.* 600. *Sp. Pl. p.* 1135. *Fl. Suec. n.* 705.

HEDYPNOIS *tectorum* caule folioſo ramoſo, foliis runcinatis nudis, radicalibus lanceolatis, caulinis ſagittatis acutis ſeſſilibus. *Hudſon. Fl. Angl. ed.* 2. *p.* 341.

CREPIS foliis ad terram pinnatis, ſuperne amplexicaulibus pinnatis haſtatis. *Haller. Hiſt. n.* 31.

CREPIS *tectorum. Scopoli Fl. Carn. n.* 954.

HIERACIUM luteum glabrum ſive minus hirſutum. *I. B.* II. 1024.

CICHOREUM pratenſe luteum lævius. *Baub. Pin.* 126. *Park.* 778.

HIERACIUM aphacoides. *Ger. em.* 297.

HIERACIUM foliis et facie chondrillæ. *Parkinſ.* 794. *Raii Syn. p.* 165. Smooth Succory Hawkweed. *Lightfoot Fl. Scot. p.* 440.

RADIX annua, ſimplex, parum fibroſa, deſcendens, luteſcens.

CAULIS pedalis, bipedalis et ultra, erectus, angulato-ſtriatus, nunc glaber, nunc hirſutulus, præſertim inferne, ſæpe purpureus, folioſus, ramoſus.

FOLIA valde variabilia, ſæpe tota glabra, alias utrinque hirſutula, radicalia taraxaci perſimilia, ſed paulo anguſtiora, nervo medio ſuperne purpureo, caulina amplexicaulia, acuta, varie dentata, ramea ſubintegra, linearia, ſubſagittata, marginibus revolutis.

FLORES inter minores hujus familiæ, flavi, laxe corymboſi.

CALYX communis duplex, exterior breviſſimus, patulus, interior ſubcylindraceus, ſimplex, ſulcatus, ſquamis erectis, linearibus, conniventibus, æqualibus, longitudinaliter pilis globuliferis hiſpidulis, ſquamæ ad baſin quinque aut plures, ſubulatæ, breves, inæquales, laxæ, pariter hiſpidulæ.

COROLLA compoſita, imbricata; *Corollulis* hermaphroditis, plurimis, æqualibus, propria monopetala, truncata, quinquedentata, ſubtus plerumque purpurea, *fig.* 1.

STAMINA: FILAMENTA quinque, capillaria, breviſſima. ANTHERA cylindracea, tubuloſa, *fig.* 2.

PISTILLUM: GERMEN ſubovatum. STYLUS filiformis, longitudine ſtaminum. STIGMATA duo, reflexa, *fig.* 3.

SEMINA viginti et ultra in ſingulo capitulo, fuſca, ſtriata; *Pappus* ſemine longior, ſeſſilis, ſimplex, *fig.* 4.

ROOT annual, ſimple, furniſhed with few fibres, deſcending, yellowiſh.

STALK from one to two feet high or more, upright, ſomewhat angular and finely grooved, ſometimes perfectly ſmooth, ſometimes a little hairy, eſpecially towards the baſe, often purple, leafy, and branched.

LEAVES extremely variable, ſometimes perfectly ſmooth, ſometimes ſlightly hirſute on both ſides, thoſe next the root very like the leaves of dandelion, but a little narrower, the midrib purple on the upper ſide, thoſe of the ſtalk embracing the ſtalk, pointed, and variouſly indented, thoſe of the branches nearly entire, linear and ſomewhat arrow-ſhaped, the edges rolled back.

FLOWERS ſmaller than moſt of this family, yellow, and growing looſely in a kind of corymbus.

CALYX common to all the florets double, the exterior one very ſhort and ſpreading, the interior one ſomewhat cylindrical, ſimple, and grooved, the ſcales upright, linear, connivent, equal, longitudinally beſet with ſtiff hairs, having a little globule at their extremities, the ſcales at the baſe are about five or more in number, ſubulate, ſhort, unequal, looſe, and like the others ſlightly hiſpid.

COROLLA compound, and imbricated; *Florets* hermaphrodite, numerous and equal, each ſingle floret monopetalous, truncated, having five teeth, and for the moſt part purple beneath, *fig.* 1.

STAMINA: five, very ſhort, capillary FILAMENTS. ANTHERÆ united into a cylindrical tube, *fig.* 2.

PISTILLUM: GERMEN ſomewhat ovate. STYLE filiform, the length of the ſtamina. STIGMATA two, turned back, *fig.* 3.

SEEDS twenty or more in each head, brown, and finely grooved; *Down* longer than the ſeed, ſeſſile, and ſimple, *fig.* 4.

The great variety of appearances to which this plant is ſubject, in common with many others of the ſame claſs, has occaſioned no ſmall confuſion among botaniſts, eſpecially the older ones, who have divided it into ſeveral ſpecies: even modern botaniſts, and thoſe of the firſt character, have confeſſed the difficulty of diſtinguiſhing it in its various ſtates. LINNÆUS exclaims, *Nulla planta hac vulgatior, nulla magis ſtructura et facie varians, nulla magis confuſis ſynonymis.* HALLER writes, *Inſuperabiles tenebræ ſynonyma obducunt:* and SCOPOLI ſays, *Melius diceretur Crepis* VARIA.

Perhaps nothing ſhort of repeated obſervation will enable a botaniſt to diſtinguiſh the ſame plant in its various ſtates, eſpecially ſuch as are ſubject to ſuch unuſual variations; yet there is frequently ſome character not liable to be altered by difference of ſoil and ſituation, which, if pointed out, will be of great ſervice in directing thoſe who may not have plants conſtantly before them. RAY obſerves, that the flowers, heads, and ſeeds of this plant are ſmaller than thoſe of any other Engliſh Hawkweed, the *Hyoſeris* excepted (he might have added the *Hypochæris glabra*). To the ſmallneſs of the flowers, &c. may be joined the ſtructure of the calyx and the ſtem-claſping leaves; and when it is known to be a plant growing generally in this country on dry banks, in paſtures, and on walls, we flatter ourſelves there will be little difficulty, with the aſſiſtance of our figure, which repreſents the plant of its medium ſize, in diſtinguiſhing it at all times.

It flowers from June to September.

Mr. HUDSON has thought proper to remove it from the genus *Crepis* of LINNÆUS, with which it muſt be owned it does not well accord, and make it an *Hedypnois*; yet it does not very well agree with the character he himſelf has given of that genus; for the pappus can ſcarcely be ſaid to be ſubplumoſus, unleſs very highly magnified.

Sowerby del et sculp

Leóntodon hispidum.

LEONTODON HISPIDUM. ROUGH DANDELION.

LEONTODON *Lin. Gen. Pl.* SYNGENESIA POLYGAMIA ÆQUALIS.

Recept. nudum. *Calyx* imbricatus, ſquamis laxiuſculis. *Pappus* plumoſus.

Raii Syn. Gen. 6. HERBÆ FLORE COMPOSITO, NATURA PLENO LACTESCENTES.

LEONTODON *hiſpidum* calyce toto erecto, foliis dentatis integerrimis hiſpidis: ſetis furcatis. *Lin. Syſt. Vegetab. p.* 596. *Sp. Pl.* 1124. *Fl. Suec. n.* 694.

HEDYPNOIS ſcapo nudo unifloro, foliis lanceolatis dentatis hiſpidis. *Hudſon Fl. Angl.* 340.

PICRIS caule nudo, unifloro, foliis aſperis dentatis. *Haller. Hiſt. n.* 25.

LEONTODON *hiſpidum.* *Scopoli Fl. Carn. n.* 977.

TARAXACONOIDES perennis et vulgaris. *Vaill. Act.* 1721, *p.* 232.

HIERACIUM aſperum folio magno dentis leonis. *Bauh. Pin.* 127.

HIERACIUM dentis leonis folio hirſutum. *Ger. em.* 303.

HIERACIUM aſperum foliis et floribus dentis leonis bulboſi. *Park.* 788.

DENS LEONIS hirſutus λεπτόκαυλος Hieracium dictus. *Raii Syn. p.* 171. Rough Dandelion commonly called Dandelion Hawkweed. *Lightfoot Fl. Scot. p.* 433.

RADIX perennis, obliqua, e nigro-fuſca, plurimis fibris pallidioribus, in terram recte demiſſis capillata.	ROOT perennial, oblique, of a blackiſh brown colour, furniſhed with numerous fibres of a paler colour, running ſtraight into the earth.
SCAPI plerumque plures ex eadem radice, pedales aut ſeſquipedales, erecti, teretes, fiſtuloſi, hirſuti, ſimplices, nudi, ſubinde foliolo ſive pluribus inſtructi, ſuperne obvie ſtriati et incraſſati, ad baſin purpurei.	STALKS uſually ſeveral from the ſame root, a foot or a foot and a half high, upright, round, hollow, hirſute, ſimple, naked, now and then furniſhed with one or more ſmall leaves, above obviouſly ſtriated and thickened, purple at the baſe.
FOLIA radicalia plurima, in pratis ſuberecta, in apricis ſupra terram expanſa, palmaria ſeu ſpithamæa, petiolata, oblonga, ſinuato-dentata, obtuſiuſcula, pallide viridia, hirſuta, pilis ut etiam ſcapi furcatis.	LEAVES: radical leaves numerous, in meadows nearly upright, in expoſed ſituations expanded on the ground, a hand's breadth or more in length, ſtanding on foot-ſtalks, oblong, indented and toothed, bluntiſh, of a pale green colour, hirſute, the hairs as alſo thoſe of the ſtalk forked at the extremity.
FLORES majuſculi, lutei, ante floreſcentiam ſemper nutantes.	FLOWERS largiſh, yellow, before blowing always drooping.
CALYX ſordide virens, ſquamæ laxe imbricatæ, inæquales, pilis longis albidis plerumque ſimplicibus hirſutæ.	CALYX of a dingy green colour, ſcales looſely imbricated, unequal, rough with long whitiſh hairs, which are for the moſt part ſimple.
COROLLA compoſita, æqualis, floſculi quinquedentati, tubus ſuperne piloſus, *fig.* 2.	COROLLA compound, equal, florets furniſhed with five teeth, the tube hairy on the upper part, *fig.* 2.
SEMINA oblonga, ſublinearia, longitudine fere pappi, exteriores paululum incurvati, interiores recti, ad lentem tranſverſe rugoſi, *fig.* 3.	SEEDS oblong, nearly linear, almoſt the length of the pappus, the outer ones bending a little inward, the innermoſt ones ſtraight, when magnified tranſverſely wrinkled, *fig.* 3.
PAPPUS piloſus, ſeſſilis, *fig.* 4.	DOWN hairy, and ſeſſile, *fig.* 4.
RECEPTACULUM planum, nudum, punctatum.	RECEPTACLE flat, naked and dotted.

Like the other plants of the claſs *Syngeneſia*, the *Leontodon hiſpidum* is ſubject to vary conſiderably in ſize and haírineſs; but very luckily it has one character which attends it in all its ſtates, and which never fails to diſtinguiſh it, *its bloſſoms droop while in the bud*: ſtriking as this character is, we believe it has eſcaped the obſervation of former Botaniſts, at leaſt it has not been conſidered as of the firſt conſequence in aſcertaining the ſpecies. The ſingleneſs of its ſtalks alſo contributes to diſtinguiſh it from ſome other plants of the ſame claſs, while the hairs on the leaves afford a more minute diſtinction, being uſually bifid, but not always ſo.

As far as we have had opportunity of obſerving, it is a very general plant throughout the kingdom, eſpecially where there is chalk or lime-ſtone. In ſuch ſort of paſtures it abounds as much as the common Dandelion does in rich cultivated ones, and when in flower, which is uſually in July, cloaths them in the ſame golden livery.

As it forms ſo conſiderable a part of our paſturage, it is of ſome conſequence that we ſhould know whether Cattle are fond of it, either freſh or made into hay; and we wiſhed to lay before our readers the reſult of LINNÆUS or his Pupils experiments on this head; but, though a Swediſh plant, it unfortunately proved to be one of thoſe with which no experiments were made.

The common Dandelion, according to the Linnæan character, is certainly no *Leontodon*, the pappus being ſimple, and SCOPOLI has accordingly made another genus of it, *Hedypnois*.

Mr. HUDSON has united the preſent plant, the *Leontodon autumnale*, two ſpecies of *Crepis*, with the *Picris echioides*, under one genus of the ſame name *Hedypnois*; and HALLER arranges our plant with his *Picris*. Amidſt all this confuſion we have thought it beſt in the preſent inſtance to follow LINNÆUS, eſpecially as there is nothing in the fructification of our plant which militates againſt the generic character of his *Leontodon*.

ONOPORDUM ACANTHIUM. COTTON THISTLE.

ONOPORDUM *Lin. Gen. Pl.* Syngenesia Polygamia Æqualis.

Recept. favoſum. *Cal.* ſquamæ mucronatæ.

Raii Syn. Gen. 9. Herbæ flore ex flosculis fistularibus composito, sive capitatæ.

ONOPORDUM *Acanthium* calycibus ſquarroſis: ſquamis patentibus, foliis ovato oblongis ſinuatis. *Lin. Syſt. Vegetab. p.* 607. *Sp. Pl. p.* 1158. *Fl. Suec. n.* 724.

ONOPORDUM caule alato, foliis ovatis dentatis, dentibus anguloſis ariſtatis. *Haller hiſt. n.* 159.

ACANOS *Spina.* *Scopoli Fl. Carn. n.* 1013.

SPINA alba tomentoſa latifolia ſylveſtris. *Bauh. pin.* 382.

ACANTHIUM album. *Ger. emac.* 1149.

ACANTHIUM vulgare. *Parkinſ.* 1149.

CARDUUS tomentoſus, Acanthium dictus vulgaris. *Raii Syn.* 196. Common Cotton Thiſtle. *Hudſon Fl. Angl. ed.* 2. *p.* 354. *Lightfoot Fl. Scot. p.* 459.

RADIX biennis.	ROOT biennial.
CAULIS tripedalis ad ſepedalem, ad baſin uſque ramoſus, ſublanuginoſus, per totam longitudinem alatus, alis latis, ſpinoſis, ſpinis luteſcentibus, divergentibus.	STALK from three to ſix feet high, branched down to the bottom, ſomewhat woolly, winged throughout its whole length, wings broad and ſpinous, the ſpines yellowiſh and diverging.
RAMI longi, diffuſi.	BRANCHES long, and ſpreading.
FOLIA ſeſſilia, ovata, acuta, decurrentia, ſinuata, dentata, ſeu anguloſa, utrinque lanugine incana, inferiora ampliſſima, longitudine ſeſquipedalia, latitudine fere pedalia, margine ſpinoſa.	LEAVES ſeſſile, ovate, pointed, running down the ſtalk, ſinuated and indented or angular, covered on both ſides with a kind of white woolly down, the lowermoſt leaves very large, a foot and a half long, and almoſt a foot in breadth, ſpinous on the edge.
FLORES purpurei, erecti, terminales, magnitudine florum Cardui mariani.	FLOWERS terminal, purple, , upright, the ſize of thoſe of the Milk Thiſtle.
CALYX: *communis* ſubrotundus, ventricoſus, imbricatus, *ſquamis* numeroſis, ſpinoſis, undique prominentibus, ſpinis apice luteis, baſi pilis albis intertextis, *fig.* 1.	CALYX: *common* to all the florets, ſomewhat round, bellying out, and imbricated, the *ſcales* numerous, ſpinous, projecting on every ſide, the ſpines yellow at the points, and at the baſe interwoven with white hairs, *fig.* 1.
COROLLA: compoſita, tubuloſa, uniformis; *Corollulæ* hermaphroditæ, æquales, monopetalæ, infundibuliformes, *tubo* tenuiſſimo, *fig.* 2. *limbo* erecto, ventricoſo, quinquefido, laciniis æqualibus, linearibus, *fig.* 3.	COROLLA compound, tubular, uniform, *Florets* hermaphrodite, equal, monopetalous and funnel-ſhaped, *tube* very ſlender, *fig.* 2. *limb* upright, bellying out, divided into five equal linear ſegments, *fig.* 3.
STAMINA: Filamenta quinque, capillaria, breviſſima; Antheræ purpureæ, in cylindrum coalitæ, quinquedentatæ, *fig.* 4.	STAMINA: five capillary, very ſhort Filaments; Antheræ purple, forming a cylindrical tube, terminating above in five teeth, *fig.* 4.
PISTILLUM: Germen ovatum, *fig.* 6. Stylus filiformis, ſtaminibus longior; Stigma bifidum, *fig.* 5.	PISTILLUM: Germen ovate, *fig.* 6. Style filiform, longer than the ſtamina; Stigma bifid, *fig.* 5.
PERICARPIUM nullum, *Calyx* arcte connivens.	SEED-VESSEL none, the *Calyx* cloſing ſtrongly together.
SEMINA obovata, ſubcompreſſa, obſolete angulata, rugoſa, nigricantia, *fig.* 7. *Pappus* ſeſſilis, ad lentem hiſpidulus, *fig.* 8.	SEEDS inverſely ovate, a little flattened, faintly angular, wrinkled, blackiſh, *fig.* 7. *Down* ſeſſile, ſlightly hiſpid when magnified, *fig.* 8.
RECEPTACULUM cellulis membranaceis, tetragonis, reticulatum, favi inſtar, *fig.* 9.	RECEPTACLE reticulated with ſquare, membranous cells, like a honeycomb, *fig.* 9.

When the Cotton-Thiſtle grows to its full ſize, in a pure air, uncontaminated by London Smoke, the grandeur and ſnowy whiteneſs of its foliage render it highly conſpicuous and ornamental.

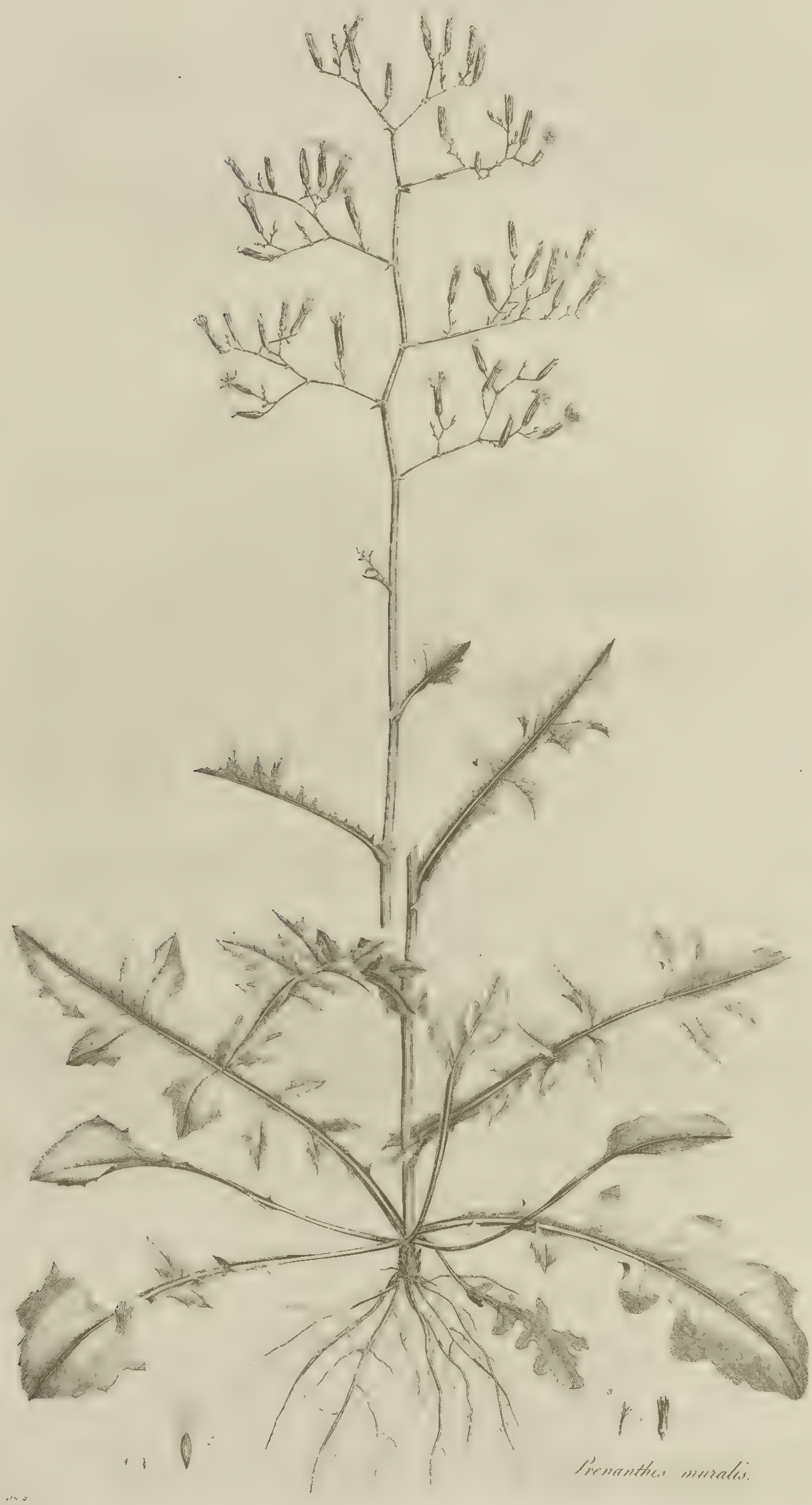
With us it grows moſt commonly on the ſunny ſide of dry banks, and occaſionally among rubbiſh, but very ſeldom in open fields; hence it proves very little injurious to the huſbandman.

It is diſtinguiſhed from the Carduus tribe, by having a receptacle ſomewhat like a honeycomb, *vid. fig.* 9. It differs alſo in another circumſtance. When the flowering is over, the innermoſt ſcales of the calyx cloſe ſtrongly together, and preſerve the ſeed; in the Thiſtles, as ſoon as the ſeed is ripe, the firſt hot day opens the heads, expands the pappus, and the leaſt wind carries away the ſeed; in the Onopordum they remain ſhut up, and ſtrongly defended, nor can they commit themſelves to the earth, or be eaten by birds, till long expoſure to the weather has decayed the calyx which encloſes them; on this account, they may afford ſuſtenance to birds later in the year, when ſimilar food is not to be obtained.

June and July are the principal months of its flowering.

It is not very ſubject to the depredations of inſects, and it is defended by its ſtrong ſpines from the attacks of moſt quadrupeds.

Onopordum Acanthium.



Prenanthes muralis.

PRENANTHES MURALIS. IVY-LEAVED WILD LETTUCE.

PRENANTHES *Linnæi Gen. Pl.* SYNGENESIA POLYGAMIA ÆQUALIS.

Recept. nudum. *Calyx* calyculatus. *Pappus* ſimplex, ſubſeſſilis. *Floſculi* ſimplici ſerie.

Raii Syn. Gen. 6. HERBÆ FLORE COMPOSITO, NATURA PLENO LACTESCENTES.

PRENANTHES *muralis* floſculis quinis, foliis runcinatis. *Linn. Syſt. Vegetab. p.* 596. *Sp. Pl.* 1121. *Fl. Suec. n.* 692.

PRENANTHES foliis ſerratis pinnatis, pinna ſuprema triangulari trilobata. *Haller. hiſt. n.* 18.

PRENANTHES muralis. *Scopoli Fl. Carn. n.* 964.

LACTUCA ſylveſtris murorum flôre luteo. *I. B.* II. 1004.

SONCHUS lævis laciniatus muralis parvis floribus. *Bauhin. Pin.* 124.

SONCHUS lævis muralis. *Ger. emac.* 293.

SONCHUS lævis alter parvis floribus. *Park.* 805. *Raii Syn. p.* 162. Ivy-leaved Sow-thiſtle, or Wild Lettuce. *Hudſon. Fl. Angl. ed.* 2. *p.* 338. *Lightfoot Fl. Scot. p.* 431.

RADIX perennis, ramoſa, pallide fuſca, lacteſcens.	ROOT perennial, branched, of a pale brown colour, and milky.
CAULIS pedalis ad tripedalem, erectus, ſimplex, foliosus, ſuperne ſubflexuoſus, teres, glaucus, purpuraſcens.	STALK from one to three feet high, upright, ſimple, leafy, ſomewhat crooked towards the top, round, glaucous, and purpliſh.
FOLIA radicalia Soncho oleraceo perſimilia, inferne purpurea, caulina alterna, amplexicaulia, patentia.	LEAVES next the root very like thoſe of the common Sow-thiſtle, purple on the under ſide, thoſe of the ſtalk alternate, ſpreading, and embracing it.
FLORES parvi, lutei, erecti, paniculati.	FLOWERS ſmall, yellow, upright, growing in a panicle.
PANICULA ampla, nuda, ramoſiſſima, purpuraſcens.	PANICLE large, naked, exceedingly branched, and purpliſh.
CALYX communis cylindraceus, glaber, purpuraſcens, ſquamis cylindri numero corollularum, ſquamis ad baſin cylindri tribus breviſſimis inæqualibus, *fig.* 1.	CALYX: the common Calyx cylindrical, ſmooth, purpliſh, the ſcales of the cylinder as numerous as the florets, with three, very ſhort, unequal ſmall ones at its baſe, *fig.* 1.
COROLLA compoſita, *Corollulæ* hermaphroditæ plerumque quinque, æquales, in orbem ſimplicem poſitæ, latiuſculæ, nervoſæ, quinquedentatæ, *fig.* 2.	COROLLA compound, *Florets* hermaphrodite, uſually five in number, equal, forming a ſingle circle, broadiſh, ribbed, terminated by five teeth, *fig.* 2.
STAMINA: FILAMENTA quinque, capillaria, breviſſima, flava; ANTHERÆ cylindraceæ, tubuloſæ.	STAMINA: five capillary FILAMENTS, very ſhort and yellow; ANTHERÆ forming a hollow cylinder.
PISTILLUM: GERMEN ſubovatum; STYLUS filiformis, ſtaminibus longior; STIGMA bifidum, reflexum, *fig.* 3.	PISTILLUM: GERMEN ſubovate; STYLE filiform, longer than the ſtamina; STIGMA bifid and reflexed, *fig.* 3.
SEMEN oblongum, baſi acuminatum, nigrum, ſtriatum: PAPPUS breviſſime petiolatus, ſimplex, *fig.* 4.; lente auct. *fig.* 5.	SEED oblong, pointed at the baſe and ſtriated: DOWN ſtanding on a very ſhort foot-ſtalk, ſimple, *fig.* 4.; magnified, *fig.* 5.

Some of the old Botaniſts conſidered this plant as a *Lactuca*; others as a *Sonchus*. It approaches neareſt to the former, both in its fructification and habit, not but the foliage is very like that of the *Sonchus oleraceus*. LINNÆUS, from the paucity of its florets, makes a diſtinct genus of it, though number ſeems ſcarcely ſufficient to conſtitute a generic character. This paucity of florets (there being ſeldom more than five) at once diſtinguiſhes it however from all its kindred; but at the ſame time we have known it not a little to puzzle ſtudents beginning to learn the claſſes, and who had ſtudied them from ſuch flowers as Dandelion.

It is not a very common plant with us, but is met with occaſionally on walls, in woods, and other ſhady places. We obſerved plenty of it this year on the outſide of the pales which terminate the Terrace at the Spaniard, Hampſtead-Heath, on the declivity towards Lord Mansfield's little wood.

It flowers from July to September.

SONCHUS PALUSTRIS. MARSH OR TREE SOW-THISTLE.

SONCHUS *Lin. Gen. Pl.* SYNGENESIA POLYGAMIA ÆQUALIS.

Recept. nudum. *Calyx* imbricatus, ventricoſus. *Pappus* plumoſus.

Raii Syn. Gen. 27. HERBÆ FLORE COMPOSITO, NATURA PLENO LACTESCENTES.

SONCHUS *paluſtris* pedunculis calycibuſque hiſpidis ſubumbellatis, foliis runcinatis baſi ariſtatis. *Lin. Syſt. Vegetab.* p. 594. baſi ſagittatis. *Sp. Pl.* p. 1116.

SONCHUS aſper arboreſcens. *Bauhin. Pin.* p. 124. ed. 2.

HIERACIUM arboreſcens paluſtre. *Ejuſd.* ed. 1.

SONCHUS tricubitalis, folio cuſpidato. *Merr. Pin.*

SONCHUS arboreſcens alter. *Ger. Em.* p. 294.

SONCHUS lævis altiſſimus vel Sonchus lævior auſtriacus 5. altiſſimus. *Cluſ. Hiſt.* CXLVII.

SONCHUS arboreſcens. *Parkins.* p. 808. *Raii Syn.* p. 163. The greateſt Marſh Tree Sow-thiſtle. *Hudſon. Fl. Anglic.* p. 337.

RADIX perennis, plurimis fibris majuſculis capillata, minime vero repens ſicut in arvenſi.	ROOT perennial, furniſhed with numerous large fibres, but not creeping, as in the corn Sow-thiſtle.
CAULIS: ex eadem radice, exſurgunt caules plures, erecti, orgyales, et ultra, craſſitie pollicis, angulati, læves, purpuraſcentes, fiſtuloſi, lacteſcentes, folioſi, apice ramoſi.	STALK: from the ſame root ariſe ſeveral ſtalks, upright, ſix feet or more high, the thickneſs of one's thumb, angular, ſmooth, purpliſh, hollow, milky, and branched at top.
FOLIA caulina ſparſa, inferiora baſi ſagittata, runcinata, laciniis duabus, vel tribus utrinque inæqualibus, acuminatis, terminali longiſſima, ſuprema integra, enſiformia, baſi ariſtata, omnibus minutim denticulatis.	LEAVES of the ſtalk placed without any regular order, the lower ones arrow-ſhaped at the baſe, and runcinate, with two or three unequal pointed ſegments on each ſide, the terminal one very long, the upper leaves entire, ſword-ſhaped, bearded at the baſe, all of them very finely toothed.
FLORES ſubumbellati, lutei, floribus arvenſis duplo minores.	FLOWERS of a yellow colour, about half the ſize of thoſe of the corn Sow-thiſtle, forming a large kind of umbel.
PEDUNCULI hiſpidi ſeu potius viſcidi cum omnes pili globulo terminantur.	FLOWER-STALKS hiſpid or rather viſcid, as each hair is terminated by a globule.
CALYX communis primo cylindraceus, apice truncatus, viſcidus, peracta floreſcentia ventricoſo-conicus, ſquamis plurimis, linearibus, inæqualibus.	CALYX: the common calyx at firſt cylindrical, truncated at top, and viſcid, the flowering being over, bellying out at bottom and conical, the ſcales numerous, linear and unequal.
COROLLA compoſita, imbricata, uniformis. *Corollulæ* hermaphroditæ, numeroſæ, æquales. *Tubus* longitudine limbi, albus, piloſus. *Limbus* linearis, apice quinquedentatus, *fig.* 1, 2.	COROLLA compound, imbricated and uniform. *Florets* hermaphrodite, numerous, and equal. *Tube* the length of the limb, white and hairy. *Limb* linear, terminated by five teeth, *fig.* 1, 2.
STAMINA: FILAMENTA quinque, capillaria, breviſſima. ANTHERÆ flavæ, in tubum cylindraceum coalitæ, *fig.* 3.	STAMINA: five, capillary, very ſhort FILAMENTS. ANTHERÆ yellow, forming a cylindrical tube, *fig.* 3.
PISTILLUM: GERMEN oblongo-ovatum, album. STYLUS filiformis, longitudine ſtaminum. STIGMATA duo, revoluta, *fig.* 4, 5.	PISTILLUM: GERMEN oblong-ovate, white. STYLE filiform, the length of the ſtamina. STIGMATA two, rolled back, *fig.* 4, 5.
SEMEN pallide fuſcum, oblongum, utrinque ſulcatum, unde ſubtetragonum apparet, *fig.* 6.	SEED pale brown, oblong, with a groove on each ſide, whence it appears ſomewhat four cornered, *fig.* 6.
PAPPUS ſemine longior, ſeſſilis, ſimplex.	DOWN longer than the ſeed, ſeſſile, unbranched.
RECEPTACULUM nudum, punctis prominulis ſcabrum.	RECEPTACLE naked, rough with ſmall prominent points.

PARKINSON gives a tolerable figure, and a pretty accurate deſcription of this plant; and ſucceeding Botaniſts, particularly RAY, have ſufficiently aſcertained its ſpecific characters: nevertheleſs HALLER conſiders it as a variety of the *arvenſis*: his words are, "nec mihi omnia conſideranti differre videtur." Had the Baron ſeen the plant growing, he certainly would not have been thus ſingular in his opinion.

It agrees with the *arvenſis* in having a perennial root, which however does not creep. When placed in a garden, by the ſide of the *arvenſis*, it exceeds it one half; and when planted by the water ſide, out-tops it by two-thirds. Indeed, in ſuch ſituations we have ſeen it ten feet high, and we believe it may juſtly be conſidered as the talleſt Engliſh plant; but though it is ſo much taller than the *arvenſis*, its bloſſoms are not ſo large. In its place of growth it differs alſo from the *arvenſis*; while the one is chiefly obſerved in corn-fields, the other is a conſtant inhabitant of marſhes. There is a difference alſo in the periods of their flowering, the *paluſtris* being later by about three weeks; but the baſe of the leaf in theſe two plants affords, perhaps, the beſt character, and of which LINNÆUS, with his uſual acumen, has availed himſelf.

The *Sonchus paluſtris* occurs ſparingly in the marſhes about Blackwall and Poplar, and flowers the latter end of July.

The common Sow-thiſtle is well known to be a favourite food of rabbits; but we believe it has ſcarcely been ſuſpected, that it might be ranked with our eſculent herbs; yet a gentleman, whoſe delicate ſtate of health has led him to make experiments on ſuch kind of plants, and in whoſe veracity we place the moſt implicit confidence, aſſures us, that he has found the tender ſhoots and buds of the common Sow-thiſtle (the ſmooth ſort) boiled in the manner of Spinach, to afford excellent greens, ſuperior to any others which he has tried, not in common uſe.

Sonchus palustris

ACHILLEA PTARMICA. SNEEZEWORT.

ACHILLEA *Lin. Gen. Pl.* SYNGENESIA POLYGAMIA SUPERFLUA.

Recept. paleaceum. *Pappus* nullus. *Cal.* ovatus, imbricatus. *Floſculi* radii circiter 4.

Raii Syn. Gen. 8. HERBÆ FLORE COMPOSITO DISCOIDE, SEMINIBUS PAPPO DESTITUTIS *corymbiferæ* DICTÆ.

ACHILLEA *Ptarmica* foliis lanceolatis acuminatis argute ſerratis. *Lin. Syſt. Vegetab. p.* 647. *Sp. Pl. p.* 1266. *Fl. Suecic. n.* 771.

ACHILLEA foliis linearibus lanceolatis acutiſſime ſerratis. *Haller hiſt.* 117.

DRACUNCULUS ſerrato folio pratenſis. *Bauh. p.* 198.

PTARMICA *Ger. emac.* 606. *Park.* 859. *Raii Syn. p.* 183. Sneezewort, Baſtard-Pellitory, Gooſe-Tongue. *Hudſon, Fl. Angl.* 375. *Lightfoot, Fl. Scot. p.* 495.

RADIX perennis, repens, alba, ſubgeniculata, fibris majuſculis et longiſſimis donata, e geniculis exeuntibus, ſapore acri et fervido.	ROOT perennial, creeping, white, ſomewhat jointed, furniſhed with large and very long fibres which proceed from the joints, of a hot acrid taſte.
CAULIS pedalis ad tripedalem, erectus, plerumque ſimplex, rigidulus, inferne teres, glaber, ſuperne ſubangulatus, villoſus, paniculatim ramoſus.	STALK from one to three feet high, upright, generally ſimple, ſomewhat rigid, below round and ſmooth, above ſlightly angular, villous, and branching out into a kind of panicle.
FOLIA numeroſa, alterna, ſeſſilia, amplexicaulia, linearia, acuta, bi vel tripollicaria, utrinque glabra, lucidiuſcula, ſaturate viridia, margine retrorſum ſcabra, ſubcrenata; crenis minutim ſerrulato aculeatis; ſubtus trinervia; nervis longitudinalibus, quorum intermedius eſt coſta.	LEAVES numerous, alternate, ſeſſile, embracing the ſtalk, linear, pointed, two or three inches long, ſmooth on both ſides, and ſomewhat ſhining, of a deep-green colour, the edge rough, if the finger be drawn along it, from the top to the baſe, ſomewhat crenated, the notches forming a ſharp prickly kind of ſaw, underneath having two longitudinal ribs, beſide the midrib.
CORYMBUS terminalis, compoſitus, erectus, villoſus, folioſus.	CORYMBUS terminal, compound, upright, villous, and leafy.
BRACTEÆ lineares in pedunculis.	FLORAL-LEAVES linear on the flower-ſtalks.
CALYX *communis* hæmiſphericus, ſubtomentoſus, imbricatus, ſquamis ovato-lanceolatis, erectis, ſubcarinatis, margine rufis, ſubciliatis.	CALYX *common* to all the florets, hemiſpherical, ſomewhat woolly; the ſcales compoſing it placed one over another, of an oval-pointed ſhape, upright, ſomewhat keeled, the margin reddiſh, and ſlightly edged with hairs.
COROLLA compoſita, radiata, *flores femineæ* in radio, ligulatæ, numero 8-10, *lamina* ovata, alba, patens, biſulca, apice obtuſa, tridentata, *fig.* 1. *tubus* marginatus, brevis, longitudine germinis, apice rubellus, *fig.* 2. *flores* hermaphroditi in diſco numeroſi, *tubus* ſubcylindraceus, marginatus, vireſcens; *limbus* quinquefidus, albus, tubo brevior, laciniis ſubrevolutis, *fig.* 3.	COROLLA compound and radiate, *female flowers* in the circumference, tubular at bottom and ſpreading at top, from 8 to 10 in number, the *lamina* ovate, white, ſpreading, with two grooves, blunt at top, with three ſmall blunt teeth, *fig.* 1. the tube two-edged, ſhort; the length of the germen, and reddiſh at top, *fig.* 2. *hermaphrodite* flowers numerous in the centre, the *tube* nearly cylindrical, two-edged, greeniſh, the *limb* white, divided into five ſegments, ſhorter than the tube, the ſegments ſomewhat rolled back, *fig.* 3.
STAMINA in hermaphroditis; FILAMENTA quinque, capillaria; ANTHERÆ flavæ, in tubum coalitæ, *fig.* 4.	STAMINA in the hermaphrodite flowers; FILAMENTS five, very fine; ANTHERÆ yellow, uniting in a tube, *fig.* 4.
PISTILLUM in femineis et hermaphroditis: GERMEN compreſſum, turbinatum; STYLUS filiformis; STIGMATA duo, revoluta, apicibus obtuſis, *fig.* 5.	PISTILLUM in the female and hermaphrodite flowers; GERMEN flattened, broadeſt at top; STYLE thread-ſhaped; STIGMATA two, rolled back, the ends blunt, *fig.* 5.
SEMINA plurima, nuda, utrinque ſubalata, nitida, apice truncata.	SEEDS numerous, naked, having a kind of wing on each ſide, ſhining, and cut off as it were at top.
RECEPTACULUM paleaceum, ſquamis membranaceis, lieneari-lanceolatis, obtuſis, vix longitudine florum.	RECEPTACLE chaffy, the ſcales membranous, of a ſhape betwixt linear and lanceolate, blunt, ſcarcely the length of the flowers.

The dried powder of this plant ſnuffed up the noſtrils provokes ſneezing, hence it has acquired its name of *Sneezewort;* chewed in the mouth, like Pellitory of Spain, it promotes the flow of the ſaliva, and is found ſerviceable in the cure of the tooth-ach: theſe appear to be the only medicinal purpoſes to which it is applied.

In its double ſtate, it has long been an ornament in gardens, and diſtinguiſhed by the name of *Batchelors Buttons;* having a creeping and very increaſing root, it requires more care to deſtroy than to increaſe it.

It is a common plant in wet paſtures and on heaths, and may be found in plenty by the ſides of the ditches in Batterſea-Meadows, where it flowers in July and Auguſt.

Achillea Ptarmica

J. Sowerby del. et sc.

Anthemis Cotula. Stinking Mayweed.

ANTHEMIS *Lin. Gen. Pl.* Syngenesia Polygamia Superflua.

Recept. paleaceum. *Pappus* nullus. *Cal.* hemiſphæricus, ſubæqualis. *Floſculi* radii plures quam 5.

Raii Syn. Gen. 8. Herbæ flore composito discoide seminibus pappo destitutis corymbiferæ dictæ.

ANTHEMIS *Cotula* receptaculis conicis: paleis ſetaceis, ſeminibus nudis. *Lin. Syſt. Vegetab. p.* 646. *Sp. Pl. p.* 1261. *Fl. Suec. n.* 767.

CHAMÆMELUM foliis glabris, duplicato-pinnatis, nervo foliaceo, pinnulis lanceolatis ſeminibus exaſperatis. *Haller hiſt.* 104.

ANTHEMIS *Cotula. Scopoli Fl. Carn. n.* 1092.

CHAMÆMELUM fætidum. *B. Pin.* 135.

CHAMÆMELUM fætidum ſeu Cotula fætida *I. B.* III. 120.

COTULA alba *Dod. Pempt.* 258. *Raii Syn. p.* 185. Stinking Mayweed. *Hudſon. Fl. Angl. ed.* 2. *p.* 373. *Lightfoot Flor. Scot. p.* 495.

Tota planta fœtidiſſima, ſublanuginoſa.	The whole plant extremely fetid, and ſlightly woolly.
RADIX annua, ſimplex, fibroſa.	ROOT annual, ſimple, and fibrous.
CAULIS pedalis ad bipedalem, erectus, ſubangulatus, ſtriatus, pubeſcens, ramoſus, ſæpe uſque ad baſin.	STALK from one to two feet high, upright, ſomewhat angular, finely grooved, downy, branched often almoſt to the bottom.
FOLIA alterna, ſeſſilia, ſublanuginoſa, pinnata, coſta lineam lata, ſubtus carinata, pinnis plerumque ramoſis, planis, acutis, ſuperne punctis impreſſis, nudo oculo conſpicuis notata.	LEAVES alternate, ſeſſile, ſlightly woolly, pinnated, the midrib a line broad, keeled underneath, the pinnæ for the moſt part branched, flat, pointed, on the upper ſide marked with impreſſed dots viſible to the naked eye.
PEDUNCULI erecti, ſtriati, nudi, ſuperne ſubincraſſati.	FLOWER STALKS upright, finely grooved, naked, ſomewhat thickened above.
FLORES albi, diſco luteo, minime vireſcente.	FLOWERS white, the centre yellow, without any tendency to green.
CALYX communis, hæmiſphericus, imbricatus, ſquamis pallide virentibus, exterioribus obtuſis, fuſco marginatis, carina ſaturatius virente.	CALYX common to all the florets, hemiſpherical, imbricated, the ſcales of a pale green colour, the outer ones blunt, and edged with brown, the keel more deeply coloured.
FLOSCULI *radii* tredecem circiter, feminei, ſubovati, lineas duas fere lati, obtuſi, binerves, tridentati, dentibus obtuſis, *fig.* 1. pars tubuloſa floſculi ut ut *Germen*, glandulis pellucidis, nudo oculo conſpicuis ornata, *fig.* 2. *Stigma* bifidum, laciniis reflexis, ſæpe mancum, *fig.* 3.	FLOWERS of the *radius* about thirteen, female, nearly ovate, almoſt two lines broad, obtuſe, two-rib'd, terminating in three obtuſe teeth, *fig.* 1. the tubular part of the floret as well as the *Germen*, ornamented with tranſparent glands, viſible to the naked eye, *fig.* 2. *Stigma* bifid, the ſegments reflexed, often imperfect, *fig.* 3.
FLOSCULI *diſci* numeroſi, tubuloſi, hermaphroditi, quinquedentati, *fig.* 4. *Stigma* bifidum, laciniis revolutis, *fig.* 6. *Germen* ut ut corolla ad lentem glanduloſa, *fig.* 5.	FLOWERS of the *diſk* numerous, tubular, hermaphrodite, five-tooth'd, *fig.* 4. *Stigma* bifid, the ſegments rolled back, *fig.* 6. *Germen* as well as the corolla, when magnified, ſtudded with little glands, *fig.* 5.
SEMEN obtuſe tetragonum, fuſcum, rugoſum, apice planum, puncto in vertice prominulo, excavato, inferne attenuatum, *fig.* 7. auct.	SEED bluntly four-cornered, brown, wrinkled, flat at top, with a prominent hollow point in the centre, below ſlenderer, *fig.* 7. magnified.
RECEPTACULUM ſubcylindraceum, ſuperne paleis ſetaceis, rigidis inſtructum, *fig.* 8.	RECEPTACLE nearly cylindrical, on the upper part furniſhed with rigid, briſtle-ſhaped paleæ or chaff, *fig.* 8.

The *Anthemis Cotula*, like the *Matricaria Chamomilla*, is very common in corn-fields, where it is well known frequently to bliſter the ſkin of the reapers, or of children who may happen to gather it, which the Matricaria never does;—if the plant be examined with a microſcope, it will be found beſprinkled with little glands, in which its acrid matter moſt probably reſides.

Independent of this quality, it abounds to that degree in ſome corn-fields, as greatly to diminiſh the crop.

It is fond of a ſoil well manured, and as it is frequently ſuffered to ſeed on dunghills, it by that means often becomes more generally diſſeminated: farmers cannot be too careful in weeding their dunghills; they are not aware of the amazing increaſe from a ſingle plant of the *Anthemis Cotula*, *Rumex criſpus*, *Chenopodium album*, or many others equally, if not more, injurious.

We have obſerved the petals to vary much in length and breadth, and Botaniſts have ſometimes found it with double flowers.

It differs greatly in its qualities from the *Anthemis nobilis* and *Matricaria Chamomilla*, has never been much in uſe, nor are its medicinal effects well known. Decoctions of it are ſaid ſometimes to have been employed as a bath or fomentation againſt hyſteric ſuffocations, and hæmorrhoidal pains and ſwellings. Mr. Ray ſays, that a decoction of the herb has by ſome been given internally, with ſucceſs, in ſcrophulous caſes. Brown Langrish gives an account of a decoction of it throwing a perſon afflicted with rheumatiſm into a profuſe ſweat, and curing him. *Lewis's Mat. Med. p.* 223. *Vid. Matricaria Chamomilla.*

Anthemis Cotula

Sowerby del et sculp

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Chrysanthemum Leucanthemum

Chryſanthemum Leucanthemum. Common Ox-Eye, or Greater Daiſy.

CHRYSANTHEMUM *Lin. Gen. Pl.* Syngenesia Polygamia Superflua.

Recept. nudum. *Pappus* marginatus. *Cal.* hemiſphæricus, imbricatus, ſquamis marginalibus membranaceis.

Raii Syn. Gen. 8. Herbæ flore composito discoide, seminibus pappo destitutis, corymbiferæ dictæ.

CHRYSANTHEMUM *Leucanthemum* foliis amplexicaulibus oblongis; ſuperne ſerratis; inferne dentatis. *Lin. Syſt. Vegetab. ed.* 14. *p.* 772. *Sp. Pl. p.* 1251. *Fl. Suec. n.* 763.

MATRICARIA foliis radicalibus petiolatis, ovatis, crenatis, caulinis amplexicaulibus dentatis. *Haller hiſt.* 98.

MATRICARIA *Leucanthemum. Scopoli Fl. Carn. n.* 1041.

BELLIS ſylveſtris caule folioſo major. *Bauh. Pin.* 261.

LEUCANTHEMUM vulgare. *Tourn.* 492.

BELLIS major. *Ger. emac.* 634.

BELLIS major vulgaris ſive ſylveſtris. *Parkinſ.* 528. *Raii Syn. p.* 184. The Greater Daiſy, or Ox-Eye. *Lightfoot Fl. Scot. p.* 488. *Hudſon. Fl. Angl. ed.* 2. *p.* 371.

RADIX perennis, fuſca, ſubrepens, fibroſa.	ROOT perennial, brown, ſomewhat creeping, and fibrous.
CAULIS pedalis, ſeſquipedalis et ultra, erectus, rigidus, anguloſus, inferne purpuraſcens, hirſutus, ſuperne nudus, ſimplex, ſubinde ramoſus.	STALK a foot or a foot and a half high or more, upright, rigid, angular, below purpliſh and hairy, above naked, ſimple, ſometimes branched.
FOLIA radicalia a caulinis diverſiſſima, petiolis longis inſidentia, obovata, vix pubeſcentia, inciſo-ſerrata, caulina alterna, ſeſſilia, amplexicaulia, linearia, extrorſum latiora, remote denticulata, denticulis ad baſin crebrioribus et longioribus.	LEAVES next the root very different from thoſe of the ſtalk, ſtanding on long footſtalks, obovate, ſcarcely downy, deeply ſawed, thoſe of the ſtalk alternate, ſeſſile, ſtem-claſping, linear, outwardly broadeſt, diſtantly toothed, teeth at the baſe more crowded and longeſt.
FLORES pedunculati, terminales, ſolitarii, magni, ſpecioſi.	FLOWERS ſtanding on footſtalks, terminal, ſingle, large, and ſhewy.
PEDUNCULI ſtriati, ſubincraſſati.	FLOWER-STALKS finely grooved, and ſomewhat thickened.
CALYX communis hemiſpherico-planus, arcte imbricatus, ſquamis exterioribus oblongo-ovatis, obtuſiuſculis, margine membranaceis, fuſcis, interioribus lanceolatis, acutis.	CALYX common to all the florets, like a hemiſphere flattened, cloſely imbricated, exterior ſcales oblong-ovate, ſomewhat blunt, the margin membranous and brown, interior ſcales lanceolate and pointed.
COROLLA compoſita, radiata; *Diſcus* luteus, convexus; *Radius* albus patens.	COROLLA compound and radiate; *Centre* yellow and convex; *Circumference* white and ſpreading.
COROLLULÆ *Hermaphroditæ*, tubuloſæ, numeroſæ, infundibuliformes, quinquefidæ, in diſco, *fig.* 1. *Femininæ* 16 circiter, in radio, oblongæ, obtuſæ, tricrenatæ, *fig.* 5.	FLORETS *Hermaphrodite* tubular, numerous, funnel-ſhaped, divided into five ſegments, in the centre, *fig.* 1. *Female* about 16 in the circumference, oblong, obtuſe, three-notch'd, *fig.* 5.
ANTHERÆ flavæ, in tubum coalitæ, *fig.* 2.	ANTHERÆ yellow, forming a tube, *fig.* 2.
PISTILLUM *Hermaphroditis:* Germen oblongum, ſtriatum, angulatum, glabrum, *fig.* 3. Stylus filiformis, ſtaminibus longior; Stigmata duo, ſubrevoluta, ſuperne ad lentem canaliculata, apicibus truncatis, craſſiuſculis, *fig.* 4. *Femineis* Germen et Stylus ut in Hermaphroditis; Stigma ſubſimile, laciniis minus revolutis, *fig.* 6.	PISTILLUM of the *Hermaphrodite* flowers: Germen oblong, finely grooved, angular, ſmooth, *fig.* 3. Style filiform, longer than the ſtamina; Stigmata two, rolled a little back, on the upper part channelled if magnified, the tips truncated and thickiſh, *fig.* 4. of the *Female* flowers, Germen and Style as in the Hermaphrodite flowers; Stigma ſomewhat ſimilar, but leſs rolled back, *fig.* 6.
SEMEN oblongum, baſi attenuatum, undique profunde ſulcatum, ex nigro-purpuraſcens, *fig.* 7, 8. *fig.* 9. auct.	SEED oblong, ſlenderer towards the baſe, deeply grooved all round, and purpliſh black, *fig.* 7, 8. *fig.* 9. magn.

This ſpecies of Chryſanthemum is extremely common in meadows and paſtures, ſometimes even on walls, and in corn-fields; it is a hardy perennial, increaſes greatly by ſeed, and flowers in June and July.

As it is ſo prevalent in paſtures, it is of no ſmall conſequence to aſcertain how far it is agreeable to cattle, and, on ſuch occaſions, the only guide we have at preſent to conſult, are the experiments of Linnæus; from thoſe it appears that kine and ſwine refuſe it, but that horſes, ſheep, and goats feed on it.

The freſh leaves chewed, diſcover a ſweetiſh, unpleaſant, ſlightly aromatic taſte, ſomewhat like Parſly, but not hot or biting; they have been recommended in diſorders of the breaſt, both aſthmatical and pthiſical, and as diuretics, but are now ſeldom called for.

As ſuch a number of beautiful double varieties of the Common Daiſy are met with in almoſt every garden, it has often been matter of wonder to us, that we never ſee this plant in a ſimilar ſtate: I have indeed been very credibly informed, that two double varieties of this plant exiſt in a garden near Air in Scotland, but never yet ſaw them.

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Matricaria Chamomilla

[illegible] sculp

MATRICARIA CHAMOMILLA. CORN FEVERFEW, or CAMOMILE.

MATRICARIA *Lin. Gen. Pl.* SYNGENESIA POLYGAMIA SUPERFLUA.

Recept. nudum. *Pappus* nullus. *Cal.* hemiſphæricus, imbricatus: marginalibus ſolidis, acutiuſculis.

Raii Syn. Gen. 8. HERBÆ FLORE COMPOSITO DISCOIDE, SEMINIBUS PAPPO DESTITUTIS, CORYMBIFERÆ DICTÆ.

MATRICARIA *Chamomilla* receptaculis conicis, radiis patentibus, ſquamis calycinis margine æqualibus. *Lin. Syſt. Vegetab. p.* 643. *Sp. Pl. p.* 1256. *Fl. Suec. n.* 764.

MATRICARIA foliis planis capillaribus, duplicato-pinnatis, pinnulis lanceolatis bifidis trifidiſque. *Haller. hiſt. n.* 101.

CHAMÆMELUM vulgare, Leucanthemum Dioſcoridis. *Bauh. pin.* 135.

CHAMÆMELUM *Gerard. emac.* 754.

CHAMÆMELUM vulgare *Parkinſ.* 85. (qui vulgare cum nobili confundit) *Raii Syn. p.* 185. *Hudſon Fl. Angl. ed.* 2. *p.* 372. *Lightſoot Fl. Scot. p.* 491.

RADIX annua, ſimplex, fibroſa.	ROOT annual, ſimple, and fibrous.
CAULIS pedalis, ad ſeſquipedalem, erectus, ramoſus, ſubanguloſus, ſtriatus, lævis.	STALK a foot, or a foot and a half high, upright, branched, ſomewhat angular, ſtriated, and ſmooth.
FOLIA ſaturate viridia, alterna, ſeſſilia, lævia, pinnata, pinnis linearibus, inferioribus ſimplicibus, ſuperioribus ramoſis, pinnulis acutis, mucronatis, divaricatis, coſta ſemilineam lata, carinata.	LEAVES of a deep green colour, alternate, ſeſſile, ſmooth, pinnated, the pinnæ linear, the lower ones ſimple, the upper ones branched, the pinnulæ or ſmall pinnæ ſharp and terminating in a ſhort point, divaricating, the midrib half a line broad, and keeled.
PEDUNCULI erecti, ſtriati, nudi, ſuperne ſubincraſſati.	FLOWER STALKS upright, ſtriated, naked, a little thickened above.
FLORES albi, diſco e luteo-vireſcente.	FLOWERS white, the diſk of a yellowiſh-green colour.
CALYX communis hemiſphæricus, ſquamis plurimis, imbricatis, obtuſiuſculis, apice fuſceſcentibus, ſubmembranaceis, longitudine fere tubi floſculorum femineorum in radio, *fig.* 1.	CALYX common to all the florets, hemiſpherical, ſcales numerous, imbricated, ſomewhat obtuſe, the tips browniſh, and a little membranous, almoſt the length of the tube of the female flowers in the circumference, *fig.* 1.
FLOSCULI radii 13 circiter, feminei, oblongi, ſeſquilineam lati, biſulci, tridentati, dentibus obtuſiuſculis, *fig.* 2. STIGMA bifidum, flavum, laciniis reflexis, *fig.* 3.	FLOWERS of the radius about 13 in number, female, oblong, a line and a half broad, two-grooved, three-toothed, teeth bluntiſh, *fig.* 2. STIGMA bifid, yellow, the ſegments turned back, *fig.* 3.
FLOSCULI diſci, numeroſi, tuboloſi, hermaphroditi, quinquedentati, *fig.* 4. STIGMA bifidum, laciniis reflexis, *fig.* 5.	FLOWERS of the diſk, numerous, tubular, hermaphrodite, five-toothed, *fig.* 4. STIGMA bifid, the ſegments turned back, *fig.* 5.
SEMINA numeroſa, minuta, pallide fuſca, oblonga, ſulcata, *fig.* 6.	SEEDS numerous, minute, of a pale brown colour, oblong and grooved, *fig.* 6.
RECEPTACULUM oblongum nudum.	RECEPTACLE oblong and naked.

The *Matricaria Chamomilla, Anthemis Cotula,* and *Chryſanthemum inodorum*, are three very common plants in the neighbourhood of London; as the two firſt are extremely ſimilar in their general appearance, and are often found growing together, we have publiſhed them in the ſame number, that an opportunity might be afforded of comparing and contraſting them.

PARKINSON, deceived by their great ſimilarity, makes only one plant of them; *Mayweed*, ſays he, is ſo like unto Chamomile, that I muſt needs join them together.

The ſtudent who is acquainted with the mode of inveſtigating the generic character of each, will quickly diſtinguiſh the one from the other; on diſſecting the heads, he will find the pointed paleæ which are fixed to the receptacle of the *Anthemis* totally wanting in the *Matricaria;* but this knowledge, though highly neceſſary, is not ſufficient for thoſe who would wiſh to know plants at firſt ſight, which is always deſirable; we ſhall therefore, in addition to the generic character, point out ſeveral others, in which they have appeared to us materially to differ from each other.

Their place of growth affords but little diſtinction, they are both natives of corn-fields, both grow in them in the greateſt abundance, often together, frequently ſeparate, nor is it unuſual to find them on the confines of dunghills, and by road-ſides; they both flower at the ſame time, from May to July and Auguſt, both are annuals, and grow nearly to the ſame height, but in the following particulars they differ: the whole plant in the *Matricaria* puts on a deep green colour, and ſomewhat ſhining appearance; the *Anthemis*, on the contrary, aſſumes a much paler hue, and the ſtalk is often covered with a kind of woolly ſubſtance: the leaves in the *Matricaria* are nearly as fine as thoſe of fennel, which they diſtantly reſemble; in the *Anthemis* they are almoſt twice as broad, and the points of them, which in the *Matricaria* are ſimple, in the *Anthemis* are often bifid.

The Petals in both theſe plants begin to hang down in the evening, and continue to do ſo till morning; but thoſe of the *Anthemis* are in general much broader than thoſe of the *Matricaria*, and ſomewhat ſhorter; but, in this particular, both plants are ſubject to great variation; the diſk of the flower in the *Anthemis* is not ſo prominent, but of a lighter yellow than that of the *Matricaria*. Such are the characters which preſent themſelves to the eye of an accurate obſerver, but there is another which will greatly aſſiſt to corroborate, confirm, and render it impoſſible for the plants to be miſtaken, *viz.* the ſmell; if the heads of the *Matricaria* are bruiſed, they will be found to emit a ſtrong ſmell, ſomewhat reſembling the true Chamomile, but not ſo pleaſant, while the heads of the *Anthemis*, treated in the ſame manner, ſmell intolerably diſagreeable; another circumſtance may alſo be added, the *Matricaria* is not known to bliſter the ſkin, in which alone it is perhaps leſs miſchievous to the huſbandman than the other: nor is the character which may be drawn from the ſeeds to be deſpiſed, thoſe of the *Anthemis* being broad and truncated at top, wrinkly, and of a deep brown colour when ripe, thoſe of the *Matricaria* much ſmaller, paler, and different in their ſhape, *vid. fig.* 6.

July 7th, we diſcovered ſeveral larvæ feeding on this ſpecies, which produced the *Caſſida viridis.*—Cattle in general refuſe the *Matricaria.*—In Sweden the flowers are uſed medicinally inſtead of the *Anthemis nobilis.*

Mr. HUDSON, in our opinion, is perfectly juſtified, in making one plant of the *Matricaria Chamomilla* and *ſuaveolens*; Mr. LIGHTFOOT, in his *Flora Scotica,* previouſly ſuggeſted that they were the ſame. We are ſurpriſed that Profeſſor MURRAY ſhould adopt a ſpecies founded on ſuch vague characters as *radiis deflexis* and *radiis patentibus.*

Senecio erucæfolius

SENECIO ERUCÆFOLIUS. HOARY RAGWORT.

SENECIO *Lin. Gen. Pl.* SYNGENESIA POLYGAMIA SUPERFLUA.

Recept. nudum. *Pappus* ſimplex. *Cal.* cylindricus, calyculatus: ſquamis apice ſphacelatis.

Raii Syn. Gen. 7. HERBÆ FLORE COMPOSITO, SEMINE PAPPOSO NON LACTESCENTES FLORE DISCOIDE.

SENECIO *erucæfolius* corollis radiantibus, foliis pinnatifidis dentatis ſubhirtis, caule erecto. *Lin. Syſt. Vegetab.* p. 631. *Sp. Pl.* p. 1218. *Fl. Suec.* p. 750.

JACOBÆA altiſſima, foliis erucæ artemiſiæve ſimilibus et æmulis. *Rupp. Jen.* 164.

JACOBÆA Senecionis folio incano perennis. *Raii Syn.* p. 177. Hoary perennial Ragwort with Goundſel leaves. *Hudson. Fl. Angl.* p. 366.

RADIX perennis, alba, plures turiones craſſitie pennæ anſerinæ, unciales, aut biunciales, ſapore ingrato, in ſequentem annum proferens.	ROOT perennial, white, putting forth against the [illegible] year ſeveral ſhoots, the thickneſs of a [illegible] quill, an inch or two inches in length, of a diſagreeable taſte.
CAULIS erectus, tripedalis, folioſus, rigidus, ſubſtriatus, purpureus, lanuginoſus.	STALK upright, three feet high, leafy, rigid, ſlightly ſtriated, purple and woolly.
FOLIA alterna, ſemiamplexicaulia, ſubtus hirſuta, etiam incana, omnia pinnata ſeu potius pinnatifida, pinnis linearibus, acutis, dentatis.	LEAVES alternate, half embracing the ſtalk, hairy underneath, and ſometimes white with down, all of them pinnated, or rather pinnatifid, the pinnæ linear, pointed and toothed.
FLORES lutei, numeroſi, corymboſi, magnitudine fere florum Senecionis Jacobæa.	FLOWERS yellow, numerous, almoſt the ſize of the flowers of the common Ragwort, growing in a corymbus.
CALYX communis ſub-cylindraceus, ſulcatus, ſquamis tredecim, æqualibus, margine membranaceis, apicibus hirſuto-glanduloſis, nulla nigredine tinctis, ſquamulis paucis linearibus adpreſſis ad baſin, *fig.* 1.	CALYX common to all the florets, ſomewhat cylindrical, grooved, ſcales thirteen in number, equal, membranous at the edge, the tips hairy and ſomewhat glandular, not tinged with black, furniſhed with a few linear ſcales at the baſe, which are preſſed cloſe, *fig.* 1.
COROLLA compoſita, radiata, *Floſculi feminei* in radio tredecim circiter, patentes, oblongi, obſolete tridentati, *fig.* 2. *Hermaphroditi* numeroſi in diſco, limbo quinquefido, ſuberecto, *fig.* 3.	COROLLA compound and radiate, *Female flowers* in the circumference about thirteen in number, ſpreading, oblong, faintly three toothed, *fig.* 2. *Hermaphrodite flowers* in the center numerous, the limb divided into five ſegments and nearly upright, *fig.* 3.
STAMINA: FILAMENTA quinque capillaria. ANTHERÆ in cylindrum coalitæ, *fig.* 5.	STAMINA: five capillary FILAMENTS. ANTHERÆ united, and forming a cylinder, *fig.* 5.
SEMEN oblongum, hiſpidulum, pappo ſeſſili, ſimplici inſtructum, *fig.* 6.	SEED oblong, a little hiſpid, furniſhed with ſeſſile, ſimple down, *fig.* 6.

We have no doubt but the plant here figured is the *Jacobæa Senecionis folio incano perennis* of Ray's *Synopſis*, *ed.* 3. p. 177. It certainly has a leſs jagged, and more groundſel-like leaf, than the common Ragwort. Its leaves and ſtalks are alſo in general hoary, eſpecially the latter*; and ſo far the deſcription diſcriminates; but why perennial? ſince both the *aquaticus* and *Jacobæa*, with which it has the greateſt affinity, are conſidered as perennial. We believe alſo, that our plant is the *Jacobæa altiſſima, foliis Erucæ Artemiſiæve ſimilibus et æmulis* of *Ruppius F. Jen. ed. Hall.* p. 176. And as this deſcriptive name appears among thoſe which LINNÆUS applies to his *Erucæfolius*, we conſider ourſelves warranted in adopting his name of *Erucæfolius*. Baron HALLER, who [illegible] varieties, than varieties of ſpecies, in the preſent inſtance conſiders this plant as a variety only of the *Jacobæa*. Profeſſor JACQUIN, in his *Flora Auſtriaca*, gives a figure and deſcription of a *Senecio*, which he calls *erraticus*; but as he adduces no ſynonyms, and as his figure differs in ſome reſpect from our plant, though we ſtrongly ſuſpect it to be the ſame, we dare not conſider it as ſuch.

The *Senecio Erucæfolius*, though not ſo common as the *Jacobæa*, is not unfrequent in the neighbourhood of London in certain ſituations, particularly in the environs of woods, under hedges, among buſhes, &c. and no where more abundant than about the Oak of Honour Wood, near Peckham. The *Jacobæa*, on the contrary, delights to grow in open hilly paſtures, church-yards, by road ſides every where: nor do theſe plants differ leſs in their uſual period of flowering; the *Erucæfolius* flowering chiefly in Auguſt, a month later than the other.

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[*] This hoarineſs is moſt obſervable when the plant is young, or when it grows in a wood, [illegible]. When it is found in a moiſt ſoil, or cultivated in a garden, it loſes this character, in common with many other plants of the ſame claſs.

ORCHIS LATIFOLIA. MARSH ORCHIS.

ORCHIS *Lin. Gen. Pl.* GYNANDRIA DIANDRIA.

Nectarium corniforme pone florem.

Raii Syn. HERBÆ BULBOSIS AFFINES.

ORCHIS *latifolia* bulbis ſubpalmatis rectis, nectarii cornu conico : labio trilobo lateralibus reflexo, bracteis flore longioribus. *Lin. Syſt. Vegetab. ed.* 14. *p.* 810. *Sp. Pl.* 1334. *Fl. Suec. n.* 801.

ORCHIS radicibus palmatis, caule fiſtuloſo, bractæis maximis, labello trifido ſerrato: medio ſegmento obtuſo. *Haller. hiſt.* 1279. *t.* 32.

ORCHIS *latifolia. Scopoli Fl. Carn. n.* 1118.

ORCHIS palmata pratenſis latifolia, longis calcaribus. *Bauh. Pin.* 85.

PALMA CHRISTI mas. *Ger. emac.* 220.

ORCHIS palmata mas ſ. Palma Chriſti mas. *Park.* 1356.

ORCHIS palmata non maculata. *I. B.* II. 774. *Raii Syn. p.* 380. The Male-Handed Orchis, or Male Satyrion Royal. *Lightfoot Fl. Scot. p.* 516. *Hudſon Fl. Angl. ed.* 2. *p.* 385.

RADIX bulboſa, bulbis palmatis.	ROOT bulbous, bulbs palmated, or handed.
CAULIS plerumque pedalis aut ſeſquipedalis; ad apicem fere folioſus, craſſus, fiſtuloſus, ſuperne ſubanguloſus, glaber.	STALK uſually a foot or a foot and a half high, leafy almoſt to the top, thick, hollow, ſomewhat angular above, perfectly ſmooth.
FOLIA e flavo viridia, ſuberecta, glabra, nobiſcum immaculata, pleriſque hujus generis et longiora et latiora.	LEAVES of a yellowiſh-green colour, nearly upright, ſmooth, ſpotleſs with us, and both longer and broader than moſt of this tribe.
FLORES nobiſcum ſæpius roſei ſeu carnei, ſæpe purpurei, raro albi, ſpicati, conferti.	FLOWERS with us for the moſt part roſe or fleſh-coloured, often purple, rarely white, growing in a ſpike thickly together.
SPICA ſubovata, folioſa.	SPIKE ſomewhat ovate, and leafy.
BRACTEÆ magnæ, acuminatæ, coloratæ, *fig.* 1.	FLORAL-LEAVES large, long-pointed, and coloured, *fig.* 1.
COROLLA: petala quinque, duo exteriora ovato-lanceolata, ſuberecta, parum maculata, *fig.* 3. interiora conniventia, *fig.* 4. *Calcar* germine brevius, conicum, incurvum, obtuſum.	COROLLA pentapetalous, the two outermoſt ovato-lanceolate, nearly upright, ſpotted a little, *fig.* 3. the innermoſt cloſing together, *fig.* 4. the *Spur* ſhorter than the germen, conical, incurved, and blunt.
NECTARIUM obſolete trilobum lineolis et punctis ſaturatioribus pulchre variegatum, lateribus per ætatem reflexis, *fig.* 2.	NECTARY faintly three-lob'd, beautifully variegated with ſmall lines and dots of a deeper colour, the ſides reflexed with age, *fig.* 2.
STAMINA: FILAMENTA duo; ANTHERÆ ſubrotundo-clavatæ, e luteo-vireſcentes, *fig.* 5. auct.	STAMINA: two FILAMENTS; ANTHERÆ roundiſh, club-ſhaped, of a yellowiſh-green colour, *fig.* 5. magnified.

The *Orchis Latifolia* is particularly diſtinguiſhed from the others, by growing (with us at leaſt) only in very wet meadows, where *Valeriana dioica, Menyanthes trifoliata,* and *Lychnis Flos Cuculi,* uſually abound, and from which circumſtance, we have called it *Marſh Orchis,* by its ſpotleſs foliage, which is of a yellowiſh-green colour, and by the uncommon length of the floral leaves, which give the ſpike a very leafy appearance.

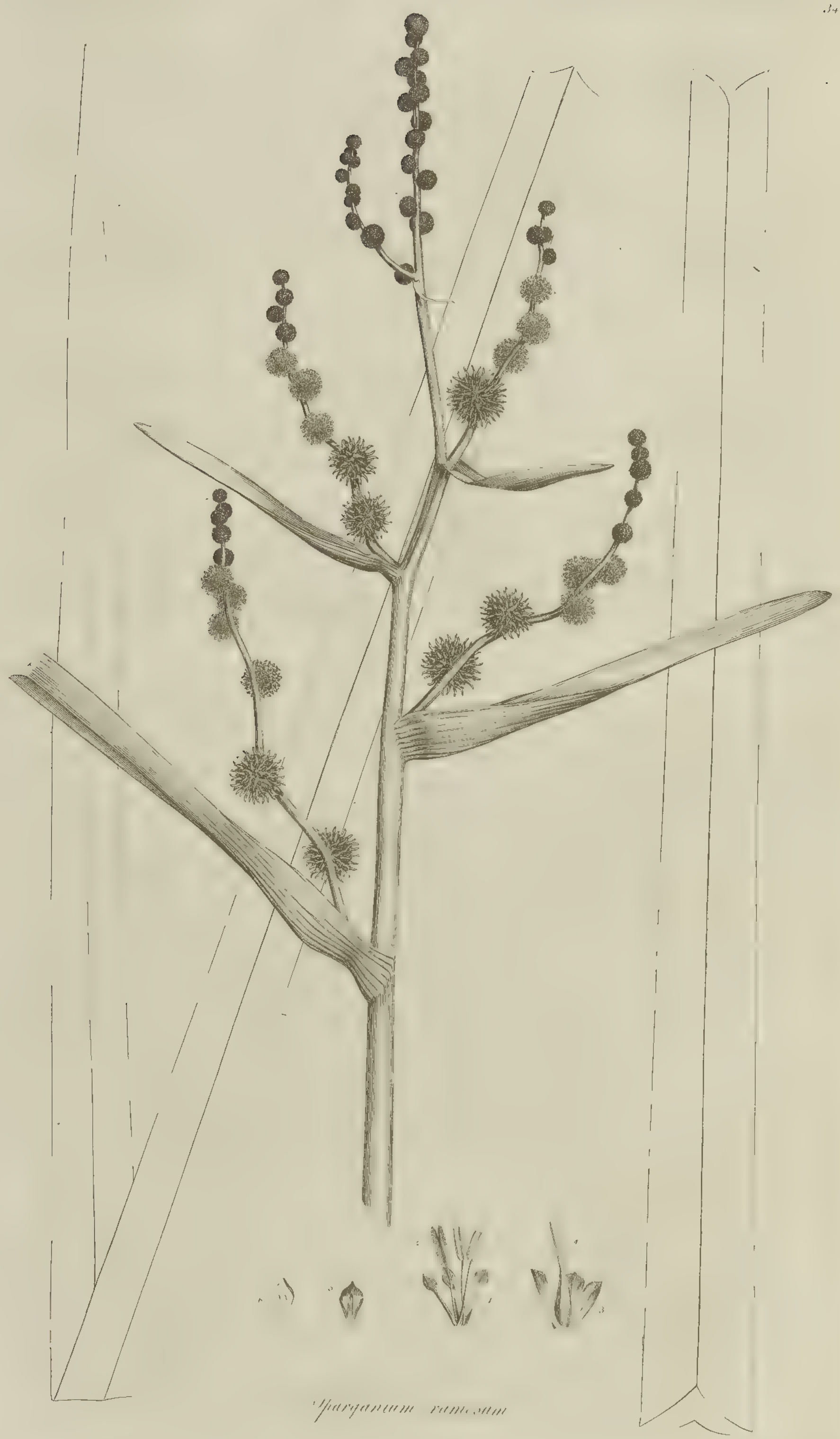
It comes neareſt to the *maculata*: HALLER repreſents the leaves ſomewhat ſpotted, and LINNÆUS deſcribes them *parum maculata;* we do not find them ſo in the neighbourhood of London; but probably they may be ſo in other places: ſhould that be the caſe, theſe two plants will approach ſtill nearer to each other.

With us, pink is the moſt predominant colour of its bloſſoms, though they are frequently found purple, and ſometimes white; even in the ſame meadow.

We need go no further than Batterſea-Meadows to find this plant in tolerable abundance; at a greater diſtance from town it will be found much more plentifully; it flowers towards the latter end of May.

It is more eaſily cultivated than many of the ſame genus, and if planted in a moiſt border, in a mixture of bog earth and loam, will grow to a much greater ſize than is repreſented on the plate.

Orchis latifolia



Sparganium ramosum

SPARGANIUM RAMOSUM. GREAT BUR-REED.

SPARGANIUM *Lin. Gen. Pl.* MONOECIA TRIANDRIA.

MASC. Amentum ſubrotundum. *Cal.* 3-phyllus. *Cor.* 0.

FEM. Amentum ſubrotundum. *Cal.* 3-phyllus. *Cor.* 0. *Stigma* 2-fidum. *Drupa* exſucca, 1-ſperma.

Raii Syn. GRAMINIFOLIÆ NON CULMIFERÆ SINGULARES ET SUI GENERIS.

SPARGANIUM *ramoſum* foliis baſi triangularibus, lateribus concavis, pedunculis ramoſis.

SPARGANIUM *erectum* foliis erectis triquetris. *Lin. Syſt. Vegetab. p.* 702. *Sp. Pl. p.* 1378. *Fl. Suec. n.* 831.

SPARGANIUM caule foliiſque erectis. *Haller hiſt.* 1303.

SPARGANIUM *erectum. Scopoli Fl. Carn. n.* 1146.

SPARGANIUM ramoſum. *Bauh. Pin.* 15. *Ger. emac.* 45. *Parkinſ.* 1205. *Raii Syn.* 437. Branched Bur-Reed. *Hudſon Fl. Angl. ed.* 2. *p.* 401. *Lightfoot Fl. Scot. p.* 539.

RADIX perennis, repens, radiculis fibrillis numeroſiſſimis inſtructis.	ROOT perennial, and creeping, the ſmall roots furniſhed with very numerous fibres.
CULMUS bipedalis, tripedalis, et ultra, erectus, teres, glaber, folioſus, foliis tribus circiter, præter bractæas.	STALK two, three feet high, or more, upright, round, ſmooth, leafy, leaves about three in number beſides the floral leaves.
FOLIA radicalia erecta, ſaturate viridia, culmo duplo fere longiora, baſi vaginantia, equitantia, paulo ſupra baſin fere ad apicem uſque triquetra, latere interiore planiuſculo, duobus exterioribus concavis.	LEAVES next the root upright, of a deep green colour, almoſt twice the length of the ſtem, ſheathy at bottom and riding one on the other, from the baſe nearly, almoſt to the top three-cornered, the inner ſide almoſt flat, the two outermoſt hollow.
BRACTEÆ quatuor circiter, foliis caulinis ſubſimiles, inferioribus longioribus.	FLORAL-LEAVES about four in number, ſomewhat like the leaves of the ſtalk, the lowermoſt longeſt.
FLORES monoici, in capitula collecti, ſpicati.	FLOWERS monoicous, formed into little heads, and growing in ſpikes.
PEDUNCULI axillares, alterni, flexuoſi, multiflori, capitulis ſeſſilibus, inferioribus femineis, duobus aut tribus, ſuperioribus maſculis pluribus; pedunculi ſupremi flores maſculos tantum gerunt.	FLOWER-STALKS growing from the boſoms of the leaves, alternate, crooked, ſupporting many flowers, the little heads ſeſſile, the lowermoſt ones female, two or three in number, the uppermoſt ones male, and more numerous; the uppermoſt flower-ſtalks bear only male flowers.
CALYX Flor. Maſc. *Amentum* commune, ſubrotundum, undique denſiſſime imbricatum, conſtans *Perianthiis propriis* plerumque triphyllis, baſi linearibus, apice ovato-acutis, deciduis, *fig.* 1. auct.	CALYX of the Male Flowers. One common roundiſh *Catkin*, cloſely imbricated on every ſide, and compoſed of numerous *individual Perianthia*, conſiſting for the moſt part of three leaves, linear at the baſe, ovate and pointed at top, and deciduous, *fig.* 1. magnified.
COROLLA nulla.	COROLLA none.
STAMINA: FILAMENTA plerumque tria, capillaria, longitudine calycis; ANTHERÆ oblongæ, flavæ, *fig.* 2.	STAMINA: uſually three capillary FILAMENTS, the length of the calyx; ANTHERÆ oblong, yellow, *fig.* 2.
CALYX Flor. Fem. *Perianthium* ut in maſculo, at baſi latior, magis concavus, nec deciduus, *fig.* 3.	CALYX of the Female Flowers. A *Perianthium* as in the males, but broader at the baſe, more concave, and not deciduous, *fig.* 3.
PISTILLUM: GERMEN oblongo-ovatum, angulatum, deſinens in STYLUM brevem ſubulatum; STIGMA oblongum ad unum latus villoſum, *fig.* 4.	PISTILLUM: GERMEN oblongo-ovate, angular, terminating in a ſhort tapering STYLE; STIGMA oblong, villous on one ſide, *fig.* 4.
PERICARPIUM: DRUPA exſucca, turbinata cum acumine, inferne angulata, *fig.* 5.	SEED-VESSEL: a juiceleſs DRUPE, turban-ſhaped and pointed; angular below, *fig.* 5.
SEMEN: NUCES duæ, oſſeæ, oblongo-ovatæ, *fig.* 6.	SEEDS: two bony NUTS, of an oblong ovate ſhape, *fig.* 6.

The *Sparganium ramoſum* having a very ſtrong creeping root, is one of thoſe plants which very ſoon fill up a ditch or piece of water, if ſuffered to remain unmoleſted; we have not ſeen it more plentiful any where than in the Iſle of Dogs, the ditches of which are full of it.

We know of no uſe to which it is applicable.

The ſtalk is liable to be eaten by ſome kind of larva whoſe hiſtory we have not yet diſcovered, the leaves by the larva of a Tenthredo unknown to us, as well as by the larva of the *Phalæna Feſtucæ*—two of which in their Chryſalis ſtate, we this year, Auguſt 24, 1786, found in a web under the leaves of the plant, in a pond near Malden in Eſſex; and on the leaves of the ſame plant, at the ſame time and place, Dr. GOODENOUGH and myſelf were ſo fortunate as to find two ſpecimens of that rare inſect the *Sphex fiſſipes Linnæi.*

The male flowers vary much in the number of their ſtamina, and both ſorts in the number of the leaves of the calyx.

In treating of the *Typha latifolia,* we promiſed, when we gave a figure of this plant, to inform our readers whether its ſeeds vegetated: we have ſince then had an opportunity of obſerving one of its heads, as it lay in a wet ſituation, aſſume a green colour, which, on a careful examination, it was found to owe to the ſeeds having juſt begun to vegetate.

SPARGANIUM SIMPLEX. SMALL BUR-REED.

SPARGANIUM *Lin. Gen. Pl.* MONOECIA TRIANDRIA.

MASC. Amentum ſubrotundum. *Cal.* 3-phyllus, *Cor.* 0.

FÆM. Amentum ſubrotundum. *Cal.* 3-phyllus. *Cor.* 0. *Stigma* 2-fidum. *Drupa* ex ſucca, 1-ſperma.

Raii Syn. GRAMINIFOLIÆ NON CULMIFERÆ SINGULARES ET SUI GENERIS.

SPARGANIUM *Simplex* foliis baſi triangularibus, lateribus planis, pedunculis ſimplicibus.

SPARGANIUM ſimplex foliis enſiformibus planis, caule ſimplici, *Hudſon Fl. Angl. p.* 401.

SPARGANIUM *natans* foliis decumbentibus planis. *Lin. Syſt. Vegetab. p.* 702. *Sp. Pl.* 1378.

SPARGANIUM non ramoſum. *Bauh. Pin.* 15.

SPARGANIUM non ramoſum. *Parkinſ.* 1205. *Raii Syn. p.* 437. *n.* 2, 3. Bur-reed not branched.

LINNÆUS makes only two ſpecies of the genus Sparganium, one of which he calls *erectum*, and the other *natans;* the former he deſcribes as very common in ditches and fiſh-ponds, the latter peculiar to lakes and deep waters.

Older Botaniſts deſcribe three ſpecies, the *ramoſum*, the *non ramoſum*, and the *minimum;* the *non ramoſum* LINNÆUS conſiders as a variety of his *erectum;* it is this plant which we here give a figure of, from a thorough conviction of its being a ſpecies perfectly diſtinct from the common one, whether it differs ſpecifically from the *natans* we do not take on us at preſent to determine: Mr. LIGHTFOOT, who has ſeen the *natans* in many places in Scotland, pronounces it a ſpecies; Mr. HUDSON, on the contrary, conſiders it as a variety of the preſent plant;—certain it is, ſoil and ſituation will occaſion an amazing difference in the appearance of plants; we need only look at the *Polygonum amphibium* to be convinced of this; when it grows on land its leaves are all erect, in the water they float; the leaves of the *Feſtuca fluitans* float in the ſpring; as the ſummer advances they grow upright; poſſibly the depth and conſequent coldneſs of the water, with other circumſtances, may occaſion the preſent plant to aſſume the floating appearance which authors deſcribe:—culture, perhaps, can only decide this matter:—let the experiment turn out as it may, as there are found to be two ſpecies with erect leaves, it became neceſſary to alter LINNÆUS's names, which Mr. HUDSON having judiciouſly done we have adopted them.

We ſhall now point out the ſeveral characters in which the preſent plant has appeared to us to differ from the *ramoſum.*

It differs in its place of growth,
In its ſize,
In the colour and ſhape of its leaves,
In the branchedneſs of its flower-ſtalks, and
In the colour of the male and female flowers.

The commom Bur-Reed grows in almoſt every ditch in the neighbourhood of London, the ſmall one on the contrary is found only in particular ſpots, particularly in ſuch pools of water as one meets with on heaths, and which are frequently made by the digging of gravel, along with the *Myriophyllum*, the *Aliſma Damaſonium, Siſon inundatum, Scirpus fluitans,* &c. It particularly abounds on Batterſea Common, juſt before you enter Wandſworth on the left-hand ſide from London, and flowers during the whole of the ſummer.

It is ſeldom found more than one fourth part ſo high as the *Sparganium ramoſum.*

The leaves incline much more to a yellow colour, and inſtead of being hollow on two ſides near the baſe, as thoſe of the *ramoſum* are, they are flat, ſo that a tranſverſe ſection forms a triangle with nearly plain ſides; we look on this as its beſt ſpecific character. Such as have opportunities of obſerving the *natans,* will do well to obſerve whether its leaves are ſimilar near the baſe.

Each flower-ſtalk ſupports only a ſingle globule of male or female flowers; the lowermoſt which ſupport the female flowers vary conſiderably in length, being ſometimes more than an inch long, and at other times ſeſſile.

The flowers before they blow look yellow, and have none of that blackneſs about them, ſo conſpicuous in thoſe of the *ramoſum:* they are alſo larger in proportion.

Sparganium simplex

The Dogs Mercury was at one period thought to be an innocent plant, its poiſonous qualities were diſcovered by accident: the Annual, or French Mercury, has, at preſent, the reputation of being not only harmleſs, but to poſſeſs medicinal virtues; it is of ſome conſequence then for us rightly to diſtinguiſh the two, and in this there is little difficulty. The Dogs Mercury has a ſtrong, creeping, perennial root; this an annual one: the Dogs Mercury flowers only in the Spring; this the whole Summer long: the Dogs Mercury has an unbranched ſtem; this a ſtalk branched down to the bottom.

The Annual Mercury has been ranked among the emollient oleraceous herbs; it is ſaid gently to looſen the belly; its principal uſe has been in glyſters.

The whole plant, particularly when in flower, has a ſtrong ſmell of Elder.

The fine blue colour which the *Dogs Mercury* acquires in drying, has induced ſeveral perſons to believe, that the plant, if properly treated, might be made, as well as many others, to produce Indigo: this induced Mr. MACINTOSH, an ingenious young gentleman of Glaſgow, to make the following chemical analyſis of it, with which he was ſo obliging as to favour me; and though it does not come under the proper plant, we apprehend no apology will be neceſſary for inſerting it here.

“ The whole plant, on being put into water, gives out a fine blue colour, which is immediately changed
“ into a green by the addition of an alcali; but an acid has not the power of changing its colour into red,
“ as it does moſt blue liquors, it only weakens the blue, and if a large quantity be added, it nearly deſtroys
“ it. The whole plant, on being dried, aſſumes a blue colour, which it gives out readily to water; but in
“ all caſes, if a boiling heat be uſed, it only acquires a deep dirty green, which changes gradually into a
“ browniſh red. Upon agitating violently the blue liquor, I always found it was changed into a brown
“ colour, the blue being entirely loſt, and not to be recovered by any means I could fall upon. There falls
“ during this proceſs, a ſmall quantity of precipitate, which is alſo brown. If the blue liquor be evaporated,
“ the whole is likewiſe changed into the ſame browniſh colour, and a ſimilar precipitate falls, which, on
“ being put into water, gives it a dark red colour. Newly-ſlacked lime put into the blue liquor, firſt
“ changes it into a green, which is very ſoon after deſtroyed. I have obſerved in the beginning of the
“ evaporation, a blue fecula upon the ſides of the veſſel, but always before the end of the proceſs, the whole
“ was of the browniſh colour mentioned above.”

MERCURIALIS ANNUA. ANNUAL, or FRENCH MERCURY.

MERCURIALIS *Lin. Gen. Pl.* DIOECIA ENNEANDRIA.

MASC. Cal. 3-partitus. *Cor.* o. *Stam.* 9-f. 12. *Antheræ* globoſæ didymæ.

FÆM. *Cal.* 3-partitus. *Cor.* o. *Styli* 2. *Capſ.* dicocca, 2-locularis, 1-ſperma.

MERCURIALIS *annua* caule brachiato, foliis glabris, floribus ſpicatis. *Lin. Syſt. Vegetab. p.* 746. *Spec. Pl. p.* 1465.

MERCURIALIS caule annuo, brachiato, foliis conjugatis, ovato lanceolatis, glabris. *Haller hiſt. n.* 1600.

MERCURIALIS *Cynocrambe Scopoli Fl. Carn. n.* 1226.

MERCURIALIS teſticulata, ſive mas Dioſc. et Plinii. *Bauhin pin.* 121.

MERCURIALIS ſpicata, ſive fæmina, Dioſc. et Plinii. *Bauhin pin.* 121.

MERCURIALIS vulgaris mas et femina. *Park.* 295.

MERCURIALIS mas et femina. *Ger. emac.* 332.

MERCURIALIS annua glabra vulgaris. *Raii Syn. p.* 139. French Mercury, the male and female, *Hudſon. Fl. Angl. ed.* 2. *p.* 435.

RADIX annua, fibroſa, alba.	ROOT annual, fibrous, of a white colour.
CAULIS pedalis ad ſeſquipedalem, erectus, glaber, ad baſin uſque ramoſus, geniculatus, geniculis incraſſatis, ſubcompreſſis, anceps, idque alterne.	STALK a foot or a foot and a half high, upright, ſmooth, branched quite to the bottom, jointed, the joints ſwelled, and ſomewhat flattened, a prominent line runs on each ſide of the ſtalk, from one joint to another, and that alternately.
RAMI alterne oppoſiti, folioſi, cauli ſubſimiles.	BRANCHES alternately oppoſite, leafy, ſomewhat like the ſtalk.
FOLIA oppoſita, petiolata, ovata, obtuſiuſcula, patentia, baſi biglanduloſa, obtuſe ſerrata, ad lentem ciliata, utrinque glabra, lucidiuſcula, venoſa.	LEAVES oppoſite, ſtanding on footſtalks, ovate, bluntiſh, ſpreading, having two glands at the baſe, obtuſely ſerrated, if magnified edged with hairs, ſmooth on each ſide, ſomewhat gloſſy, and veiny.
PETIOLI foliis multo breviores, glabri, ſupra canaliculati.	LEAF-STALKS much ſhorter than the leaves, ſmooth, channelled above.
STIPULÆ quatuor, ad genicula, utrinque binæ, minimæ.	STIPULÆ four at each joint, two on each ſide, very minute.
PEDUNCULI florum maſc. axillares, oppoſiti, erecti, nudi, filiformes, foliis longiores, ſubtetragoni, ſuperne proferentes glomerulos plures florum, ſeſſiles, odore ſambuci.	FLOWER-STALKS of the male flowers axillary, oppoſite, upright, naked, filiform, longer than the leaves, ſomewhat four-cornered, producing towards the top, ſeveral round, ſeſſile, ſmall cluſters of flowers, having the ſmell of elder.
CALYX: PERIANTHIUM tripartitum, foliolis ovatis, acutis, patentibus, *fig.* 1.	CALYX: a PERIANTHIUM deeply divided into three ſegments, which are ovate, pointed, and ſpreading, *fig.* 1.
COROLLA nulla.	COROLLA wanting.
STAMINA: FILAMENTA plerumque novem, alba, capillaria; ANTHERÆ didymæ, flavæ, *fig.* 2.	STAMINA: generally nine FILAMENTS, white and very fine; ANTHERÆ double, and yellow, *fig.* 2.
FLORES FÆMINEI in diſtinctâ plantâ.	FEMALE FLOWERS on a ſeparate plant.
PEDUNCULI axillares, foliis breviores, ſæpius biflori, inter flores fæmineos aliquando obſervatur maſculus imperfectus, longius productus.	FLOWER-STALKS axillary, ſhorter than the leaves, generally ſuſtaining two flowers; among the female flowers we ſometimes find an imperfect male flower ſtanding on a longer footſtalk.
CALYX ut in mare, niſi quod foliola paulo minora, *fig.* 3.	CALYX as in the male, except that the leaves are a little ſmaller, *fig.* 3.
COROLLA nulla.	COROLLA wanting.
NECTARIA duo, ſubulata, utrinque ad latus germinis ſolitaria, *fig.* 4.	NECTARIES two, tapering, one growing ſingly on each ſide of the germen, *fig.* 4.
PISTILLUM: GERMEN ſubrotundum, didymum, compreſſum, hiſpidum; STYLUS vix ullus; STIGMATA duo, ſubulata, patentia, longitudinaliter ſuperne hiſpida, *fig.* 5.	PISTILLUM: GERMEN roundiſh, double, flattened, hiſpid; STYLE ſcarce any; STIGMATA two, tapering, ſpreading, on the upper ſide hiſpid lengthwiſe, *fig.* 5.
PERICARPIUM: CAPSULA didyma, echhinata, bilocularis.	SEED-VESSEL a twin CAPSULE, prickly, having two cavities.
SEMEN unicum in ſingulo loculamento globoſum, extus caſtaneum, intus album.	SEED one in each cavity, globular, cheſnut coloured without, white within.

We can diſcover no ſatisfactory reaſon for calling this ſpecies by the name of French Mercury, as it is not peculiar to France, but found with us, in a variety of places: RAY mentions it as growing plentifully on the ſea-beach, near *Ryde*, in the Iſle of Wight; and PARKINSON, near a village called *Brookeland*, in Romney-Marſh, Kent: it would appear to be more common now than formerly, as we very frequently meet with it in waſte places, by the ſides of roads, and in neglected gardens, in the neigbourhood of London.

The

Mercurialis annua

AGARICUS AURANTIUS. ORANGE MUSHROOM.

AGARICUS *Linnæi Gen. Pl* CRYPTOGAMIA FUNGI.

Fungus horizontalis ſubtus lamelloſus.

Raii Syn. Gen. 1. FUNGI.

AGARICUS *aurantius* pileo conico viſcido aurantio, lamellis luteis, ſtipite nudo. *Lightfoot. Flor. Scot. p.* 1025.

AMANITA glutinoſus, flavus, pileo umbonato. *Haller. hiſt. n.* 2420.

FUNGUS parvus, lubricus, aureus, lamellis raris, amplioribus, pediculo craſſiore. *Mich. p.* 147.

FUNGUS aurantii coloris capitulo in conum abeunte. *Vaillant Bot. Par. p.* 67.

FUNGUS pratenſis minor, externe viſcidus, ſtriis ſubtus fulvis ſeu croceis. *Raii Syn. p.* 8. *n.* 38. ?

In paſcuis elatioribus ſolitarius plerumque invenitur, ſat copioſe nobiſcum.	Found plentifully enough with us in elevated paſtures, and for the moſt part ſingly.
STIPES uncialis, ad triuncialem, nudus, fiſtuloſus, fragilis, et admodum fiſſilis, craſſiuſculus, ſubtiliter ſtriatus, lævis, ſæpe tortuoſus, plerumque croceus.	STALK from one to three inches high, naked, hollow, brittle, and much diſpoſed to ſplit, thickiſh, finely ſtriated, ſmooth, often twiſted, and for the moſt part ſaffron-coloured.
PILEUS uncialis, aut biuncialis, raro triuncialis, utplurimum conicus, præſertim in junioribus, lubricus, et ſubviſcidus, primo coccineus, dein croceus, ſeu aurantius, demum niger; nonnulli formam conicam retinent uſque ad diſſolutionem, alii plani fiunt vertice tumeſcente.	STALK one or two, ſeldom three inches broad, generally conical, eſpecially when young, ſlippery, and ſomewhat clammy, at firſt of a bright ſcarlet colour, then ſaffron or orange-coloured, and finally black; ſome preſerve their conical form even in decay, others become flat with a prominent crown.
LAMELLÆ primo albidæ, dein ſubcroceæ, ſi contundantur ſtatim nigreſcentes.	GILLS firſt whitiſh, afterwards ſomewhat ſaffron-coloured, on being bruiſed quickly becoming black.

As this Fungus is ſo diſtinguiſhable for its colours, ſo diſtinct in its ſpecific characters, and withal ſo common, it is matter of admiration that we do not find more notice taken of it by Authors. Mr. LIGHTFOOT in his *Flora Scotica* has given an accurate deſcription of it, which cannot fail of making it known: he quotes SCHÆFFER's figure, which repreſents our plant, and adopts his name of *aurantius*. Mr. HUDSON does not mention it; and we are not certain whether the plant we refer to in RAY be ours or not. As well as Mr. LIGHTFOOT, we had our doubts whether it was the *fragilis* of LINNÆUS; but conſidering his deſcription, as well as that of VAILLANT, who gives a figure to which LINNÆUS refers, we are certain it muſt be a different plant. If the *fragilis* of Mr. HUDSON be the *fragilis* of LINNÆUS, it is a very different plant from ours indeed. *Vid.* SCHÆFF. *Ic. tab.* 230. to which he refers.

This Fungus is by no means uncommon in elevated paſtures, particularly where Eye-bright grows. It is uſually dwarfiſh on heaths; but where the graſs is not cloſe fed, it is found with a ſtalk three inches high. The brilliancy of its colour ſoon ſtrikes the eye. We may obſerve, that this colour is moſt vivid, or moſt inclined to red in the young ones. As it grows old, it becomes yellower, and quickly changes quite black. Indeed it has an extraordinary tendency to turn black, not only from age, but from the ſlighteſt bruiſe. The ſtalk is alſo brittle, and very apt to ſplit.

It is found in perfection about the middle of September.

It does not poſſeſs any particular acrimony; but is not numbered with ſuch as may be eaten with ſafety.

Agaricus aurantius.

[illegible] del et sculp

Agaricus aeruginosus

AGARICUS ÆRUGINOSUS. VERDIGRIS MUSHROOM.

AGARICUS *Linnæi Gen. Pl.* Cryptogamia Fungi.

Fungus horizontalis, ſubtus lamelloſus.

Raii Syn. Gen. 1. Fungi.

AGARICUS *æruginoſus* ſtipitatus, annulatus, annulo ſuperne nigricante; pileo convexo, cæruleo, viridi, viſcoſo, lamellis purpureo-fuſcis.

AGARICUS *viridis* ſtipitatus pileo convexo viridi, lamellis albidis, ſtipite longo vireſcente. *Hudſon Fl. Angl. p.* 614.

AMANITA anulatus, pileo convexo cæruleo viridi, lamellis roſeo cæruleis. *Haller. hiſt. n.* 2444.

FUNGUS medius pileo muco æruginei coloris obducto. *Raii Syn. ed.* 3. *p.* 6. *Deering Catal. Stirp. p.* 80.

FUNGUS pileolo cucullato, viſcido, intenſe viridi, et quaſi vernigine oblito, inferne lamellis et pediculo albis. *Micheli p.* 152.

AGARICUS. *Schæf. Icon. tab.* 1.

Solitarius, et cæſpitoſus in ſylvis et paſcuis naſcitur, rarior nobiſcum.	Grows ſingly, and in cluſters, in woods and paſtures, ſcarce with us.
STIPES biuncialis, ſeu triuncialis, ex albo vireſcens, fiſtuloſus, annulatus, infra annulum floccoſus, teres, ſubfragilis, ſupra annulum lævis, ſubſtriatus, ad baſin lanuginoſus, raro ſtrictus.	STALK two or three inches high, of a greeniſh white colour, hollow, ruffled, below the rufflle ſhaggy, round, ſomewhat brittle, above the ruffle ſmooth, and ſlightly ſtriated, at the baſe woolly, ſeldom perfectly ſtraight.
ANNULUS perſiſtens, tenuis, ſuperne ſtriatus, e fuſco nigricans, inferne vireſcens.	RUFFLE permanent, ſlender, on the upper ſide ſtriated and of a blackiſh purple colour, on the under ſide greeniſh.
PILEUS unciam aut duas latus, primo convexo-conicus, ex cærulæo-viridis, lubricus et ſubviſcidus, lævis, prope marginem et in margine ipſa floccis albidis adſperſus, demum planus aut parum concavus, e fuſco-luteſcens, cuticula facile ſeparanda.	CAP from one to two inches broad, at firſt ſomewhat roundiſh, yet conical, the colour of verdigris, ſlippery and ſomewhat viſcid, ſmooth, except near the edge, and on the edge itſelf, where it is covered with a whitiſh, ſhaggy ſubſtance, finally flat, or a little concave, of a yellowiſh brown colour, the cuticle eaſily peeled off.
LAMELLÆ numeroſæ, brevioribus interjectis, e fuſco-purpuraſcentes, parum nebuloſæ, demum nigricantes.	GILLS numerous, with ſhorter ones intervening, of a browniſh purple colour, a little clouded, finally blackiſh.

Amidſt that variety of colour obſervable in the Fungi, there are few in which the green predominates ſo much as in the preſent ſpecies: hence it affords an obvious character. But, alas! in theſe plants of a day, we muſt not lay too much ſtreſs on colour: *nimium ne crede colori* cannot be better applied to any ſubject. It is, however, chiefly in its decline that it loſes that verdigris green, which on its firſt appearance renders it ſo conſpicuous, the cap being often found of a pale yellowiſh brown colour, and ſometimes variegated with green, yellow, and black. The viſcidity of the cap is as conſtant a character as its green colour, and this alſo is moſt obſervable in the young ones, eſpecially in the morning, or in ſhowery weather; for in a very dry atmoſphere the moſt viſcid Fungi loſe their viſcidity. Next to the greeneſs and viſcidity of the cap, we may remark, that the edge of it, where it breaks from the annulus, is very apt to be ragged: we have alſo found, that the outer ſkin of the cap has an unuſual tendency to ſeparate from the fleſh. The gills, from the very beginning, are of a purpliſh brown colour; and the annulus or ruffle, while connected to the edge of the pileus, receives from the gills a fine powder, which communicates to the upper part of it a dark brown tint; this, contraſted with the light colour on the underſide, forms a very conſpicuous character. The ſtalk below the ruffle is uſually of a blueiſh green colour, and ſhaggy.

This Fungus is not very common with us. Several of them appeared this autumn, in a graſs plat in my garden; and I have obſerved twenty or thirty in Earl Mansfield's little wood near the Spaniard, Hampſtead-Heath, where, if the ſeaſon be not remarkably unfavourable, they are with certainty to be found about the middle of September.

It has no acrid or diſagreeable taſte; nevertheleſs, we do not venture to pronounce it an eatable one.

Ray's deſcription, though a ſhort one, and Schæffer's figure, accord exactly with our plant. Haller quotes Schæffer: we therefore conclude from that circumſtance, as well as from the conſonancy of his deſcription, that our plant is the ſame as his; and Micheli, who is alſo quoted by Haller, gives a deſcription ſo exactly correſponding with Ray's, that we have no doubt but his alſo is the ſame as ours. Whether our plant be the viridis of Mr. Hudson, we have our doubts; for he quotes authors who deſcribe two different Fungi; at the ſame time that he quotes Schæffer, *tab.* 1, (our plant), and Haller, *n.* 2444, (our plant), he refers to Micheli, Ray, and Scopoli, who deſcribe another Fungus. Scopoli gives to his the name of *virens*; part of his Diagn. is *Stipes nudus.* Ray quotes the *Fungus magnus viridis* of Sterbeck, and the *ſylvarum aſper eſculentus, ſeu ex albo vireſcens* of J. Bauhine: and Micheli thus deſcribes his, *Fungus eſculentus, pileo pulvinato, viridi, inferne cum pediculo albo.* This deſcription is quoted by Scopoli for his *virens.* Thus it would appear that theſe two are different ſpecies; we muſt leave it to Mr. Hudson to reconcile theſe contradictory ſynonyma.

It could be wiſhed, that every Fungus was as diſtinct in its characters as the preſent, we ſhould then ſoon ſee order ſpring from that chaos in which this tribe of plants has been conſidered as ſo long involved; not but that chaos which Linnæus and other Botaniſts have ſo much lamented, is rather to be conſidered as a creature of their own imagination than as the child of nature. The more we look into theſe variable plants, the more we are convinced that our ignorance of them depends on our inattention and want of obſervation. Beſtow the ſame pains on them as on other plants, obſerve them in all their ſtates, in all their varieties of ſituation, and we ſhall find that each of them has ſome peculiarity of character. The diſcovery of this character is what we ſhould aim at; but this will not be found in the cloſet. We may read over, with the moſt ſedulous attention, Batarra, Micheli, Gleditsch, and Haller, or turn over the multitudinous plates of Schæffer to little purpoſe: to know the Fungi well we muſt watch them daily and yearly; in ſhort *we muſt live with them.*

AGARICUS CARNOSUS. FLESHY MUSHROOM.

AGARICUS *carnoſus* pileo convexo albo, medio rufeſcente, lamellis confertis albis carne pilei duplo anguſtioribus.

In ſylvis aceroſis habitat nobiſcum rarior, autumno vigens.	Found with us in pine woods in the autumn, ſcarce.
Solitarius plerumque invenitur, ſubinde ceſpitoſus.	Is generally found growing ſingly, ſometimes in cluſters.
STIPES triuncialis et ultra, magnitudine fere digiti minimi, craſſus, nudus, fiſtuloſus, carne diametro tubi, firmus, albidus, ſæpe rubro maculatus, parum ſtriatus, baſi intra folia pini emortua deſcendente.	STALK three inches high and upwards, almoſt the thickneſs of the little finger, clumſy, naked, hollow, the fleſh the diameter of the tube, firm, whitiſh, often ſpotted with red, faintly ſtriated, the baſe deſcending amongſt the dead pine leaves.
PILEUS uncialis, ad triuncialem, albidus, medio rubeſcens, et hinc inde maculis concoloribus adſperſus, lævis, carnoſus, carne multo, ſolido, albo, primo convexus, dein planiuſculus, nec acris, nec lacteſcens.	CAP from one to three inches in diameter, reddiſh in the middle, and here and there blotched with ſpots of the ſame colour, ſmooth, fleſhy, the fleſh abundant, ſolid, white, firſt convex, finally almoſt flat, neither acrid nor milky.
LAMELLÆ numeroſiſſimæ, albidæ, anguſtæ, ſeſquilineam latæ, brevioribus interjectis, demum rufeſcentes.	GILLS exceedingly numerous, whitiſh, narrow, a line and a half broad, ſhorter ones intervening, finally of a reddiſh brown colour.

We can find no certain traces of this fungus either in the figures or deſcriptions of authors; at leaſt in thoſe of our own country. This may perhaps ariſe, from its being a local, or at leaſt not a common muſhroom.

We have hitherto found it only in Lord Mansfield's ſmall pine wood, Hampſtead, and there in no great plenty; but having obſerved them in the ſame ſpot, and aſſuming the ſame character for ſeveral ſucceſſive years, we are perfectly ſatisfied of its being a very diſtinct ſpecies. This autumn, Sept. 22, we found about twenty of them.

It is in ſome degree characteriſed by the ſingularity of its colour. We have few fungi that have a white Pileus, with a reddiſh diſk, and that, together with the ſtalk, irregularly blotched with the ſame colour; but it is more diſtinguiſhed by the quantity of fleſh both in the Pileus and Stipes. It is this which gives it an unuſual degree of firmneſs to the touch, and has induced us to beſtow on it the name of *carnoſus*.

Chewed, it diſcovers no unpleaſant taſte; but notwithſtanding this circumſtance, and notwithſtanding its tempting appearance, we muſt, till we have further proofs of its innocence, place it at leaſt among the ſuſpicious fungi.

Agaricus carnosus

[illegible]

Agaricus verrucosus

AGARICUS VERRUCOSUS. WARTY MUSHROOM.

AGARICUS *Lin. Gen. Pl.* CRYPTOGAMIA FUNGI.

Fungus horizontalis, ſubtus lamelloſus.

Raii Syn. Gen. 1. FUNGI.

AGARICUS *verrucoſus* ſtipitatus, ſtipite bulboſo, annulato, annulo laxo, pendulo, pileo verrucoſo, lamellis albis.

AGARICUS *muſcarius* ſtipitatus, lamellis dimidiatis ſolitariis, ſtipite volvato: apice dilatato, baſi ovato. *Lin. Syſt. Veg. p.* 820. *Spec. Pl.* 1640. *Fl. S.* 449.

AGARICUS *verrucoſus* cauleſcens, pileo convexo cinereo, verrucis lamelliſque albis. *Hudſon. Fl. Angl. p.* 613. *Lightfoot p.* 1012.

AMANITA petiolo procero fiſtuloſo annulato, pileolo plano ſtriato verrucoſo ſordido lamellis albis. *Haller Hiſt. n.* 2397.

AMANITA petiolo annulato, pileo ſanguineo, lamellis albis. *Haller Hiſt. n.* 2373.

LEUCOMYCES gemmatus. *Batar. tab.* 6. *B.*

LEUCOMYCES ſpecioſior. *Batarra tab.* 6. *A.*

AGARICUS *muſcarius*. *Scopoli Fl. Carn. n.* 1459.

FUNGORUM pernicioſorum. *Gen.* 12. *Spec.* 4. *Cluſ. p.* 280. *Schæffer. Icon. Fung. t.* XX. LXXIV? XC. XCI. CCXLI. CCLVIII? CCLXI.

Solitarie naſcitur in ſylvis frequens.	Frequent in woods growing ſingly.
STIPES palmaris et ultra, craſſitie digiti minimi, ſeu intermedii, ad baſin ſemper bulboſus, teres, ex albo-rubeſcens, et maculatus, non raro flaveſcens, annulatus.	STALK a hand's breadth or more in height, the thickneſs of the little or middle finger, always bulbous at its baſe, round, of a reddiſh white colour and ſpotted, not unfrequently yellowiſh, and furniſhed with a ring or ruffle.
ANNULUS magnus, perſiſtens, pendulus, plerumque ſtriatus, ex lamellis impreſſis.	RING or ruffle large, permanent, pendulous, for the moſt part ſtriated.
PILEUS duas, tres, aut etiam quatuor uncias latus, primo ſubrotundus, dein hemiſphericus, demum planus, ad marginem ſuperne obſolete ſtriatus, varii coloris, ſæpius vero aut ſordide ruber medio ſaturatius colorato, aut flaveſcens; plerumque verrucoſus, interdum nudus, verrucis albidis.	CAP two, three, or even four inches broad, at firſt roundiſh, then hemiſpherical, laſtly flat, on the upper ſide, faintly ſtriated at the margin, various in its colour, but moſt commonly either of a dingy red, ſtrongeſt in the middle, or yellowiſh, for the moſt part warty, ſometimes bare, the warts whitiſh.
LAMELLÆ numeroſæ, brevioribus interjectis, horizontales, primo albæ, demum ſordide carneæ.	GILLS numerous, ſhorter ones intervening, horizontal, at firſt white, laſtly of a dirty fleſh colour.

Moſt modern authors conſider the *Agaricus verrucoſus* and *muſcarius* as different ſpecies. Mr. LIGHTFOOT, ſuggeſts, that they may be only varieties differing in colour. Repeated examination has perfectly convinced us, that his conjecture is well founded; the *verrucoſus* being with us by far the moſt common, we ſhall conſider it as the ſpecies, and the *muſcarius* as the variety: ſo ſingular and ſo beautiful is the variety, however, that we intend giving a ſeparate plate of it.

Before we ſpeak more particularly of theſe fungi, it will be proper to explain to ſome of our readers what is meant by a few terms made uſe of in deſcribing this and three or four others, *viz. Volva*, *Annulus*, and *Velum*, parts which occur in ſome muſhrooms, but not in others.

There are a few of theſe plants, which, on their firſt emerging from the earth, aſſume the appearance of an egg, and are encloſed in a kind of membranous ſhell or caſe; this caſe we call the Volva. If we cut the egg longitudinally down the middle, we may obſerve the incloſed fungus as yet unexpanded. Vid. *Schæffer Icon. Fung. tab.* 244. *fig.* 1. 2. 3. As the muſhroom increaſes in ſize, it burſts open this Volva, and ſometimes leaves it intirely behind, as in the *Phallus impudicus*; but more frequently the upper half of it is borne upwards on the Pileus or Cap, which not being ſufficiently large to cover when the Pileus is expanded, it breaks in various directions, and appears in the form of a number of little knobs or warts irregularly ſcattered. Such then is the origin of the warts: as the membrane which forms them may ſometimes be thinner than ordinary; or as it may be rubbed off as the muſhroom puſhes itſelf out of the ground; or deſtroyed by heavy rains, or other accidents; ſo we never find theſe warts alike either in number or ſhape in any two fungi, and frequently intirely wanting; but if no extraordinary accident happens, they will be found in every well-formed fungus of this ſpecies. We may remark, that the *Volva*, which we have thus deſcribed, is not the *Volva* of LINNÆUS; his *Volva* is our *Annulus*.

In many of the fungi the gills are covered and protected in their infancy by a membrane, more or leſs thick, totally independent of the Volva, attached to the edge of the Pileus one way, and round the ſtalk the other. While the membrane is viſibly thus connected, which is juſt as the Pileus is beginning to expand, we call it the Velum or Veil, though generally the term is applied to thoſe membranes which are remarkably thin, almoſt like a cobweb, and which, when the Pileus is expanded, leave little or no traces of their exiſtence behind, as in the *Agaricus faſcicularis.* The greateſt part of this membrane in ſeparating is generally left either with the Pileus or Stipes: ſometimes what it leaves remains with the Pileus, and is only ſufficient to give the edge a ragged or toothed appearance; but more commonly, where it is in any degree ſubſtantial, it leaves the Pileus, and attaches itſelf to the Stipes, where it either projects horizontally, as in the *æruginoſus*; or becomes pendulous, as in the preſent ſpecies. This part, thus attached to the ſtalk, we call the *Annulus*, *Ring* or *Ruffle*.

There are three characters which diſtinguiſh the preſent ſpecies of muſhroom, *viz.* a cap, more or leſs covered with warts; a ſtalk, bulbous at its baſe, and furniſhed above with a pendulous ſtriated ruffle. Theſe will be found in every perfect fungus of this ſort. Colour is not to be depended on; the cap being ſometimes, as in the variety *muſcarius*, of the moſt beautiful crimſon, and very frequently, eſpecially in Charlton Wood, of a cream colour; but its moſt uſual tint is a dingy red, inclining to brown. The Gills are always white at firſt, and become of a dingy red at laſt. The ſtalk in thoſe which have a reddiſh Pileus is uſually mottled with red and white. The whole fungus, but particularly the baſe, is apt to be ſoon deſtroyed by the larvæ of various inſects, and among others by thoſe of an undeſcribed ſpecies of *Tipula*, ſomewhat leſs than the *Tipula plumoſa*, and diſtinguiſhed by having its legs unuſually hairy. It was by accident we diſcovered the attachment of this inſect. Betwixt the Velum and the Gills, previous to the ſeparation of the former from the edge of the Pileus, there is a conſiderable cavity. In this cavity we found, in a young fungus of this ſpecies, at leaſt twenty of theſe Tipulæ, which had introduced themſelves through an accidental aperture in the Velum.

The *Agaricus verrucoſus* is very common in all our woods about the middle of September. The *muſcarias* is plentiful only in particular ſpots.

We had the curioſity to taſte this ſhewy fungus. Chewed, it was not unpleaſant in the mouth; ſwallowed, it quickly produced a diſagreeable burning kind of ſenſation in the throat, which extended to the ſtomach, though the quantity ſwallowed was but ſmall; and this ſenſation continued a conſiderable time. That I might not be miſtaken in my idea of this ſenſation, I prevailed on my draughtſman and gardener to chew and ſwallow ſome of it, who complained of its producing a ſimilar effect. Hence we may infer, that this ſpecies, taken in any quantity, is likely to prove highly poiſonous. This effect accords with the account given of it by different authors. SCOPOLI makes mention of ſome perſons being poiſoned by it, miſtaking it for the *Agaricus cæſareus.* HALLER relates, that ſix perſons of Lithuania periſhed at one time by eating it; and that in Kamtſchatka it had driven others raving mad; that there, three or four of them are eaten without much effect, but that ten intoxicate: nevertheleſs, the Ruſſians eat it with their food; and the inhabitants of Kamtſchatka prepare a liquor from this fungus, and a ſpecies of Epilobium, which, taken in ſmall quantities, inebriates, and produces a trembling of the nerves, making ſome joyous, others melancholy. The very urine of thoſe who drink it is found to intoxicate. LINNÆUS ſays, that flies are killed, SCOPOLI only ſtupified, by taſting an infuſion of the *muſcarius* in milk, whence its name, and that it is alſo inimical to bugs; but we have certainly much better remedies for theſe troubleſome inſects.